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APRIL 1970

FEED
Situation

U. S. DEPT. OF
NATIONAL AG
APR 30 1970
CURRENT SERIAL RECORDS

ECONOMIC RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE

Table 1.--Statistical summary of prices, indexes and price ratios, recent years and months

Item	Unit	Season average		1969	1969/70			
		1967/68	1968/69	March	Dec.	Jan.	Feb.	March
FEED GRAIN AND HAY PRICES								
Corn, No. 3 Yellow, Chicago	Dol. per bu.	1.12	1.17	1.15	1.15	1.22	1.23	1.22
Price received by farmers	do.	1.03	1.08	1.09	1.09	1.12	1.14	1.13
Oats, No. 1 White, Chicago	do.	.766	.636	.687	.619	---	---	.595
No. 2 White, Minneapolis	do.	.702	.641	.661	.656	.656	.648	.635
Price received by farmers	do.	.659	.599	.621	.580	.587	.591	.581
Barley, No. 3, Minneapolis	do.	1.24	1.15	1.17	1.07	1.06	1.06	1.07
Price received by farmers	do.	1.00	.908	.898	.892	.877	.860	.831
Grain sorghum, No. 2 Yellow, Kansas City	Dol. per cwt.	1.99	2.00	1.94	2.06	2.06	2.04	2.01
Price received by farmers	do.	1.77	1.69	1.76	1.92	1.92	1.92	1.87
All hay, baled, price received by farmers	Dol. per ton	24.50	23.10	24.80	24.00	25.00	25.20	24.90
Alfalfa hay, baled, price received by farmers	do.	23.60	23.00	25.40	24.40	25.50	25.70	25.40
PROCESSED FEED PRICES, BULK								
Soybean meal, 44% solvent, Decatur	Dol. per ton	76.90	74.10	72.60	82.90	87.50	85.25	71.85
49-50%, solvent, Decatur	do.	84.30	82.50	80.10	90.40	97.60	95.60	79.65
Cottonseed meal, 41%, expeller, Memphis	do.	77.60	65.20	62.50	78.00	88.10	74.50	64.45
Linseed meal, 34%, solvent, Minneapolis	do.	76.50	68.40	64.90	69.80	74.75	76.40	73.50
Peanut meal, 50%, S.E. mills	do.	81.10	80.00	77.60	76.60	83.25	81.75	76.55
Tankage digester, 60%, Chicago	do.	92.50	94.90	88.10	98.50	121.25	134.40	113.00
Meat meal, 50%, Chicago	do.	88.80	91.60	80.90	99.00	121.90	134.40	107.10
Fish meal, 60%, New York (bagged)	do.	127.00	150.60	140.50	203.80	197.50	185.50	196.00
Gluten feed, 21%, Chicago	do.	44.90	43.70	43.50	51.60	56.75	56.00	44.40
Brewers' dried grains, 24%, Milwaukee	do.	45.90	45.00	43.00	55.20	59.25	59.75	41.90
Distillers' dried grains, 28%, Cincinnati	do.	52.70	55.30	55.50	57.60	59.00	61.75	59.00
Wheat bran, Minneapolis	do.	39.30	38.70	38.40	45.40	53.10	40.75	36.80
Buffalo	do.	42.20	41.60	41.20	45.00	52.90	45.40	39.50
Wheat middlings, Minneapolis	do.	39.80	39.90	38.70	46.30	53.60	41.25	36.80
Buffalo	do.	44.30	44.40	42.10	50.60	56.40	46.10	40.70
Hominy feed, Chicago	do.	39.00	41.10	40.80	43.10	42.40	40.90	36.20
Molasses blackstrap, New York	do.	27.93	23.10	22.70	28.20	28.20	28.20	28.20
Beet pulp (molasses), Los Angeles	do.	46.50	45.50	44.10	55.00	55.00	55.00	54.20
Alfalfa meal, 17%, dehydrated, Kansas City	do.	39.10	42.40	46.50	47.20	49.10	48.80	46.40
Tallow, inedible price, Chicago	Cents per lb.	.046	.058	.056	.066	.069	.066	.074
Urea, 42% N., Ft. Worth (bagged)*	Dol. per ton	N.A.	N.A.	74.00	71.00	71.00	71.00	71.00
PRICES PAID BY FARMERS								
Soybean meal, 44%	Dol. per cwt.	5.30	5.31	5.21	5.28	5.73	5.87	5.62
Cottonseed meal, 41%	do.	5.28	5.03	5.01	5.00	5.31	5.53	5.40
Wheat bran	do.	3.49	3.48	3.59	3.57	3.73	3.82	3.72
Wheat middlings	do.	3.59	3.58	3.67	3.67	3.81	3.91	3.72
Broiler grower feed	Dol. per ton	89.00	90.00	88.00	91.00	93.00	94.00	94.00
Laying feed	do.	81.00	80.00	79.00	81.00	82.00	83.00	83.00
Dairy feed, 16%	do.	72.00	71.00	72.00	73.00	74.00	75.00	73.00
Beef cattle feed, 30% and over	Dol. per cwt.	4.77	4.65	4.69	4.73	4.89	4.96	4.80
Hog feed, over 29%	do.	6.27	6.36	6.27	6.44	6.75	6.99	6.76
Alfalfa hay, baled	Dol. per ton	33.20	33.60	36.00	35.00	35.80	35.80	35.60
PRICE INDEXES (1957-59=100)								
Feed grains, prices received by farmers	Pct.	98	101	99	100	102	102	101
Eleven high-protein feeds, at principal markets	do.	130	126	122	141	153	150	131
Five oilseed meals	do.	138	132	128	146	158	153	132
Tankage, meat meal, and fish meal	do.	103	111	102	129	142	148	136
Gluten feed, brewers' dried grains, and distillers' dried grains	do.	114	115	113	125	134	135	120
Feed, prices paid by farmers	do.	102	102	102	104	106	108	106
LIVESTOCK AND POULTRY/FEED PRICE RATIOS	Average (March)							
Hog/corn, Chicago [2]	1959-68=14.4	17.5	18.5	18.3	23.7	22.4	23.2	21.7
Hog/corn, U.S.	1959-68=15.3	17.9	18.9	18.3	23.6	23.5	24.0	22.7
Beef steer/corn, Chicago [3]	1959-68=21.4	24.5	25.4	26.2	25.0	23.9	24.6	26.2
Milk/feed, U.S.	1959-68= 1.43	1.66	1.74	1.72	1.85	1.80	1.76	1.75
Egg/feed, U.S.	1965-69= 8.6	7.8	9.5	10.0	13.5	13.0	11.4	10.2
Broiler feed, U.S.	1965-69= 3.4	3.1	3.3	3.4	3.0	3.2	3.0	3.1
Turkey/feed, U.S.	1965-69= 4.8	4.4	4.7	4.5	5.6	5.3	5.3	5.6

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[1] Units of corn or other concentrates ration equal in value to 100 pounds of hog or beef steer, one pound of chicken, milk, or one dozen eggs. [2] Based on packer and shipper purchases of hogs and No. 3 Yellow corn. [3] Based on price of beef steers all grades sold out of first hands for slaughter, and No. 3 Yellow corn. *Price series at Houston discontinued.

Prices compiled from Chicago Board of Trade, Minneapolis Daily Market Record, Kansas City Grain Market Review, National Provisioner, Feedstuffs, and reports of the Consumer and Marketing Service.

THE FEED SITUATION

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SPECIAL ARTICLE

FEED PRICE VARIATIONS - PAST AND PRESENT 19-30

* *

Approved by

The Outlook and Situation Board

April 6, 1970

The summary of this report
was also released on the
above date

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SUMMARY

Prospective feed grain acreages, based on March 1 intentions, could produce a 1970 feed grain crop of around 185 million tons, 11 million more than the big 1969 crop. With an estimated 50-million-ton carryover, the supply for 1970/71 would reach a record 235 million tons, 11 million above the current season and 25 million above the 1963-67 average. Even allowing for a further moderate increase in utilization next year, a supply of this size probably would leave a little larger carryover at the end of 1970/71.

Farmers this spring plan a 5-million-acre increase in feed grains over 1969 plantings, up to 120 million acres. Prospective acreages of corn and oats are up 4%, sorghums 6%, and barley 5%. While many things could bring a net change in this intended acreage, feed grain producers do not often vary their plans much. For example, in 4 of the last 5 years they have planted within 2% of the planned acreage of feed grains and within 1% of their intended corn acreage.

The 1970 Feed Grain Program signup is running below the record signup last year. Through April 3 (preliminary total), farmers had signed to divert 39 million acres from feed grains, about 2 million less than last year's total signup of 41 million. (The published summary of the Feed Situation, released April 6, gave the signup through late March.

A slightly higher indicated 1970 hay acreage, along with a normal growing season, should produce a slightly larger crop than in 1969. Larger hay acreages are in prospect for most of the Great Plains and Western States, more than offsetting smaller acreages for the Eastern Corn Belt and Atlantic Coast States.

Feed grain prices have been relatively stable in recent months, following a rise from the seasonal lows of last

summer and fall. Corn and grain sorghum prices have averaged above those of a year earlier, but oat and barley prices have been lower. Even though corn prices are above the loan rate, corn price support activity is running about the same as last year. Farmers have placed a record quantity of oats under loan, but have reduced grain sorghum and barley placements from last year's pace.

This year's strong demand for feed will tend to maintain corn prices this spring, but prices probably will turn downward seasonally after midsummer, especially if the crop turns out as large as the prospective plantings indicate.

Favorable livestock-feed price ratios are encouraging liberal feeding of the larger number of livestock and poultry on farms. Domestic feed grain use this year is expected to reach a record high.

After holding up quite well in October-March of the current season, feed grain exports in April-September probably will drop off sharply as competition from Southern Hemisphere countries intensifies. Exports in 1969/70 now are expected to be about the same as last year's 18 million tons.

Strong demand this year is pushing the use of high-protein feed toward a record 19½ million tons, 5% over 1968/69. The increase is coming from larger soybean meal production, because other protein feed supplies are reduced or little changed. Soybean meal feeding probably will hit 13 million tons in 1969/70, a whopping 13% above 1968/69. Prices of soybean meal and most other protein feeds rose sharply this past fall and winter, but have dropped abruptly in recent weeks as increasing supplies are catching up with demand.

PROSPECTS FOR 1970/71

Larger Feed Grain Acreage and Production Indicated

Farmers will plant 120 million acres to feed grains in 1970, if they carry out their March 1 plans--5 million acres more than in 1969. The larger acreage this year reflects the smaller feed grain signup which was trailing last year by 5% in early April. Larger acreages are in prospect for each of the feed grains, ranging from a 3.7% increase for corn to 6.4% for sorghums (table 2).

A normal growing season, allowing for the upward trend in yield, would give a crop of around 185 million tons, 11 million tons more than near-record production in 1969. A carryover into 1970/71 of about 50 million tons is in prospect, which would give a supply of 235 million tons, 11 million tons above last year and 25 million above the 1963-67 average.

The generally strong demand for feed of the past 2 years is expected to continue into 1970/71. The prospective larger crops of feed grains will tend to keep prices comparatively low and will favor continued liberal feeding per animal unit. A further increase in livestock production is in prospect in 1970/71--possibly 2% or 3%. Feed grain disappearance may be up by 3% to 5% over the 175 million tons currently estimated for 1969/70. This would still be somewhat below the record crop, indicating some increase in carryover at the close of the 1970/71 marketing year.

Larger Corn Acreage Could Yield Record 1970 Crop

The 4% increase in the prospective corn acreage could yield a crop slightly above the 1967 record. The 1970 acreage will total nearly 67 million, based on March 1 intentions, 2 million more than was planted last year but more than 4 million less than in 1967. With a normal growing season, the crop is projected at around 4.8 billion bushels, or about 200 million more than in 1969. Even with a further expansion in utilization, a crop of this size would at least equal and may exceed total domestic use and exports.

Table 2.--Feed grains: Acreage, yield and production, United States, average 1963-67, annual 1964-70

Year	Corn 1/			Oats			Barley		
	Planted acreage	Yield per planted acre	Production	Planted acreage	Yield per planted acre	Production	Planted acreage	Yield per planted acre	Production
	Mil. acres	Bu.	Mil. bu.	Mil. acres	Bu.	Mil. bu.	Mil. acres	Bu.	Mil. bu.
Average 1963-67	67.4	2/60.6	4,093	24.3	2/35.8	867	11.3	2/34.8	387
1964	65.8	52.9	3,484	25.6	33.2	852	11.7	33.1	386
1965	65.1	62.7	4,084	24.0	38.6	927	10.1	38.8	392
1966	66.3	62.1	4,117	23.3	34.4	801	11.1	35.4	393
1967	71.1	66.9	4,760	20.6	38.3	789	10.0	37.3	373
1968	65.1	67.5	4,393	23.2	40.5	939	10.5	40.3	423
1969 3/	64.3	71.2	4,578	23.6	40.3	950	10.2	40.9	417
1970 4/	66.7	72.0	4,800	24.6	41.0	1,008	10.7	42.9	459

Year	Sorghums 1/				Total 4 feed grains		
	Acreage: Planted	Acreage: Harvested for grain	Yield per harvested acre	Production	Planted acreage	Yield per planted acre	Production
	Mil. acres	Mil. acres	Bu.	Mil. bu.	Mil. acres	Tons	Mil. tons
Average 1963-67	17.4	13.2	2/48.7	644	120.4	2/1.30	155.8
1964	16.8	11.7	41.7	490	119.9	1.12	134.2
1965	17.1	13.0	51.6	673	116.3	1.35	157.4
1966	16.4	12.8	55.8	715	117.1	1.35	157.6
1967	19.0	15.0	50.4	756	120.7	1.46	176.0
1968	18.0	14.0	52.9	740	116.8	1.45	168.9
1969 3/	17.4	13.5	55.2	743	115.5	1.51	174.2
1970 4/	18.6	5/14.5	57.9	839	120.5	1.54	185.0

1/ Acreage planted for all purposes; production for grain only. 2/ Simple average. 3/ Preliminary. 4/ Indicated 1970 acreage based on March 1 intentions of farmers. Production computed on the basis of the prospective plantings, assuming average yield per acre adjusted for trend. 5/ Unofficial estimate, based on prospective plantings.

Table 3.--Acreage of corn, sorghum and barley diverted under the 1961-70 Feed Grain Programs

Crop	Corn	% of total diverted	Grain sorghum	% of total diverted	Barley	% of total diverted	Total 3 feed grains		
							Diverted	Signed for diversion	Diverted as a % of signed
	Mil. acres	Pct.	Mil. acres	Pct.	Mil. acres	Pct.	Mil. acres	Mil. acres	Pct.
1961	19.1	76	6.1	24	1/	0	25.2	26.7	94
1962	20.3	72	5.5	20	2.4	8	28.2	32.7	86
1963	17.2	70	4.6	19	2.7	11	24.5	25.7	95
1964	22.2	69	6.5	20	3.7	11	32.4	34.3	94
1965	24.0	69	7.0	20	3.7	11	34.7	36.7	95
1966	23.7	67	7.3	21	3.7	11	34.7	36.2	96
1967	16.2	80	4.1	20	1/	0	20.3	21.5	94
1968	25.4	78	7.0	22	1/	0	32.4	34.3	94
1969	27.2	70	7.5	19	4.4	11	39.1	41.3	95
1970 2/								2/38.9	

1/ No diversion provisions. 2/ Preliminary report; through April 3.

Table 4.--Feed grains: Supplies and utilization, United States, average 1963-67, annual 1967-70

Marketing year 1/	Supply				Utilization				
					Domestic use				
	Carry-over	Production	Imports 2/	Total	Feed 3/	Food, industry and seed	Total domestic	Exports 2/	Total use
	Million bushels								
	CORN								
Average 1963-67	1,142	4,093	1	5,236	3,203	355	3,558	576	4,134
1967	823	4,760	1	5,584	3,421	368	3,789	633	4,422
1968	1,162	4,393	1	5,556	3,535	372	3,907	536	4,443
1969 4/	1,113	4,578	1	5,692	3,664	378	4,042	550	4,592
1970 4/	1,100	5/4,800	1	5,901					
	GRAIN SORGHUM								
Average 1963-67	501	644	---	1,145	517	13	530	187	717
1967	244	756	---	1,000	532	13	545	166	711
1968	289	740	---	1,029	622	13	635	106	741
1969 4/	288	743	---	1,031	698	13	711	80	791
1970 4/	240	5/839	---	1,079					
	OATS								
Average 1963-67	290	867	4	1,161	749	106	855	16	871
1967	270	789	3	1,062	673	106	779	10	789
1968	273	939	2	1,214	721	110	831	8	839
1969 4/	375	950	2	1,327	771	110	881	6	887
1970 4/	440	5/1,008	2	1,450					
	BARLEY								
Average 1963-67	121	387	10	518	221	121	342	57	399
1967	122	373	8	503	208	126	334	31	365
1968	138	423	10	571	228	131	359	13	372
1969 4/	199	417	12	628	257	136	393	10	403
1970 4/	225	5/459	10	694					
	TOTAL FEED GRAINS								
	Million tons								
Average 1963-67	53.5	155.8	.3	209.6	121.4	14.9	136.3	23.0	159.3
1967	37.1	176.0	.3	213.4	126.4	15.4	141.8	23.3	165.1
1968	48.3	168.9	.3	217.5	133.4	15.7	149.1	18.4	167.5
1969 4/	50.0	174.2	.3	224.5	140.5	16.0	156.5	18.0	174.5
1970 4/	50.0	5/185.0	.3	235.3					

1/ October-September for corn and sorghum grain; July-June for oats and barley.
2/ Includes grain equivalent of products.
3/ Residual; includes small quantities for other uses and waste.
4/ Supply preliminary; utilization based on March 1970 indications.
5/ Production based on March 1 prospective plantings.

Larger acreages are in prospect for most of the Corn Belt States, with a 4% increase indicated for the Eastern Corn Belt and 5% for the Western Corn Belt.

Sorghum Planting Up 1.1 Million Acres

Prospective sorghum acreage is about $18\frac{1}{2}$ million, 1.1 million more than in 1969. With a normal growing season this year, the crop is projected at around 840 million bushels, nearly 100 million above the 2 preceding years and 200 million above the 1963-67 average. If domestic use of grain sorghums continues to expand as it has in the past 3 or 4 years, a crop of this size could move into domestic use and export without much if any increase in carryover.

Prospective Oat Acreage Up 4%

Large oat acreages are in prospect in a number of Great Plains and Western States, more than offsetting indicated reductions in the Corn Belt. Texas farmers plan a 30% increase in oats, while a 9% increase is expected in North Dakota and 2% in South Dakota. In Illinois, a 10% reduction is in prospect and in Iowa 5% less.

The prospective U.S. acreage is up 4% which, with a normal season, would give a 1970 crop of about 1 billion bushels. This would be 6% over 1969 and 16% above the 5-year average. While oat consumption has been increasing in recent years, it has fallen short of the big crops produced. Carryover into 1970 is expected to be at a record high of around 440 million bushels. A billion bushel oat crop would be expected to result in relatively low oat prices in 1970/71 and some further increase in carryover.

Barley Acreage Also Up

Prospective barley acreage is 5% larger than last year, but a little below the 5-year average. While a 7% reduction is planned for North Dakota (the leading barley State), this is more than offset by increases in most other States. In Montana a 20% increase is indicated which would bring plantings to 2 million acres, about the same as in North Dakota.

The larger prospective acreage, with a normal growing season, would give a U.S. crop of around 460 million bushels, about 40 million over 1969. A crop of this size probably would add further to carryover stocks which are expected to reach a record high of about 225 million bushels on July 1, 1970.

Farmers Plan Slightly Larger Hay Acreage

Farmers plan to harvest about 62 million acres of hay in 1970, slightly more than last year when hay acreage reached the lowest level in more than 60 years. While hay acreage has been declining in recent years, increasing yields have resulted in a moderate uptrend in hay production. A record crop of 127 million tons was harvested in 1969, although acreage was 7% below the 1963-67 average. A normal growing season this year would be expected to produce a crop of around 129 million tons, about 2 million more than last year.

Prospective acreage is fairly close to the 1969 acreage in most States. Most of the North Atlantic and Mid-Atlantic States, however, indicate further reductions which may be attributed partly to the declining number of dairy cows and the increasing use of corn silage. Hay acreage in the North Atlantic States has declined more than a fifth during the past 10 years. A smaller hay acreage is also planned for the Eastern Corn Belt, while a larger acreage is in prospect for a number of Great Plains States--especially South Dakota and Texas where farmers plan to increase their acreage by 5%. Increases of 1% to 3% are in prospect for most of Western and South Central States.

Farmers Usually Carry Out March 1 Intentions

Farmers usually follow fairly closely their March 1 intentions in planting feed grain crops. Acreages planted, however, are closer to the intentions for

Table 5.--Corn: Planted acreage, by States and regions, United States, average 1959-60 and 1963-67, annual 1967-70

Region and State	Average 1959-60	Average 1963-67	1967	1968	1969 1/	1970 Prospective plantings 2/	1970 As a percentage of: Average 1959-60	1970 As a percentage of: Average 1963-67
	1,000 acres						Percent	
North Atlantic	2,152	2,184	2,277	2,247	2,334	2,413	112	110
East North Central								
Ohio	3,643	3,347	3,539	3,121	3,022	3,173	87	95
Indiana	5,304	4,966	5,571	4,980	4,816	5,105	96	103
Illinois	10,242	10,129	11,087	10,379	10,148	10,452	102	103
Michigan	2,056	1,891	1,833	1,705	1,671	1,788	87	95
Wisconsin	2,899	2,649	2,770	2,715	2,715	2,796	96	106
Total	24,144	22,982	24,800	22,900	22,372	23,314	97	101
West North Central								
Minnesota	6,933	5,766	6,069	5,400	4,964	5,311	77	92
Iowa	12,608	10,948	12,171	10,346	10,219	10,730	85	98
Missouri	4,315	3,283	3,357	3,189	2,966	3,203	74	98
North Dakota	1,348	896	729	642	571	514	38	57
South Dakota	4,326	3,601	3,671	3,194	3,290	3,290	76	91
Nebraska	6,886	4,570	4,989	4,839	5,106	5,259	76	115
Kansas	1,996	1,431	1,366	1,448	1,535	1,658	83	116
Total	38,412	30,495	32,352	29,058	28,651	29,965	78	98
South Atlantic	7,325	5,705	5,861	5,585	5,496	5,640	77	99
South Central	8,792	4,966	4,549	4,114	4,087	3,920	45	79
Western	1,259	1,090	1,254	1,222	1,317	1,410	112	129
Total United States	82,084	67,422	71,093	65,126	64,257	66,662	81	99

1/ Preliminary. 2/ Prospective acreage based on March 1 intentions of farmers.

Table 6.--Grain sorghum: Planted acreage, specified States, United States, average 1959-60 and 1963-67, annual 1967-70

State	Average 1959-60	Average 1963-67	1967	1968	1969 1/	1970 Prospective plantings 2/	1970 As a percentage of: Average 1959-60	1970 As a percentage of: Average 1963-67
	1,000 acres						Percent	
Missouri	612	324	350	298	271	285	47	88
South Dakota	316	490	549	456	401	393	124	80
Nebraska	1,829	2,430	2,544	2,035	1,852	1,741	95	72
Kansas	5,336	4,313	4,338	4,468	4,066	4,717	88	109
Oklahoma	1,300	1,063	1,097	976	986	996	77	94
Texas	7,963	6,619	7,771	7,538	7,538	8,066	101	122
Colorado	742	696	659	659	659	600	81	86
New Mexico	325	331	424	390	398	414	127	125
Arizona	162	187	254	239	208	183	113	98
California	276	358	451	383	448	448	162	125
Total	18,861	16,811	18,437	17,442	16,827	17,843	95	106
Other States	692	538	570	572	611	714	103	133
Total United States	19,553	17,349	19,007	18,014	17,438	18,557	95	107

1/ Preliminary. 2/ Prospective acreage based on March 1 intentions.

Table 7.--Feed grains and hay: Prospective plantings as compared with acreages planted, United States, 1962-70

Year	Prospective plantings 1/	Acreage planted: Actual 2/	Acreage planted: Percent of prospective	Prospective plantings 1/	Acreage planted: Actual 2/	Acreage planted: Percent of prospective	Prospective plantings 1/	Acreage planted: Actual 2/	Acreage planted: Percent of prospective
	Mil. acres	Mil. acres	Pct.	Mil. acres	Mil. acres	Pct.	Mil. acres	Mil. acres	Pct.
	CORN			SORGHUMS			OATS		
1962	69.3	66.0	95	14.6	15.0	103	30.5	30.2	99
1963	69.8	70.1	100	15.9	17.8	112	28.7	28.9	101
1964	68.9	67.4	98	17.7	16.9	95	27.6	26.6	96
1965	66.9	66.8	100	17.5	17.2	98	25.1	24.9	99
1966	68.4	3/67.8	99	16.8	3/16.4	98	24.7	3/24.4	99
1967	70.6	70.9	100	18.3	19.2	105	21.2	20.6	97
1968	64.9	64.8	100	17.0	17.9	105	21.2	23.0	108
1969	64.4	64.3	100	17.7	17.4	98	23.3	23.6	101
1970	66.7			18.6			24.6		
	BARLEY			TOTAL 4 FEED GRAINS			HAY		
1962	15.1	14.7	97	129.5	125.9	97	67.6	67.3	100
1963	14.0	13.8	99	128.4	130.6	102	66.9	66.7	100
1964	12.9	12.2	95	127.1	123.1	97	67.1	67.9	101
1965	10.8	10.5	97	120.3	119.4	99	68.4	68.1	100
1966	11.6	3/11.7	101	121.4	3/120.3	99	67.2	3/66.8	99
1967	10.2	10.0	98	120.3	120.7	100	63.9	64.7	101
1968	10.3	10.3	100	113.4	116.0	102	63.0	62.6	99
1969	10.4	10.2	98	115.8	115.5	100	62.7	61.8	99
1970	10.7			120.6			62.1		

1/ Prospective plantings as of March 1. 2/ As reported in the December annual summary of *Crop Production* for each year. 3/ July estimate; December estimate revised on basis of the Census.

corn than for the other feed grains. In the past 8 years, under the Feed Grain Program, actual feed grain acreage has ranged from 97% to 102% of the March 1 prospective plantings. It was within 1% of the intended acreage in 4 of the 8 years. The first year of the program (1961) is not included since the program was not announced until late in March. In making these comparisons, acreages reported in the December *Crop Production Annual Summary* were used since they are comparable with the prospective plantings rather than the latest estimates revised on the basis of the Census.

The acreage planted to corn in recent years has followed very closely the prospective acreage as reported in March. In fact, in 6 of these 8 years the actual acreages were within 1% of the prospective acreages.

Sorghum acreage varied considerably more than corn from the March 1 intentions. During the 8-year period, farmers planted from 5% below the March 1 intentions to as much as 12% above. The wider range for sorghums apparently was due principally to greater variability of weather at planting time in the Great Plains where the bulk of the crop is produced. Sorghums are frequently planted on abandoned wheat acreage which also makes for more uncertainty in the acreage that will be available for sorghums.

Prospective oat acreages also have been less reliable than corn as an indicator of the actual plantings. During the 8-year period, farmers varied their plantings from 4% below the prospective acreage to 8% above.

Barley producers followed their early plans a little closer than sorghum and oat producers. The actual acreage seeded to barley, however, was below the March 1 prospective acreage in 6 of the past 8 years, ranging from 95% in 1964 to 99% in 1963. In 1968 the planted acreage was practically the same as the March 1 intentions and in 1966 1% above.

The general tendency to seed less barley than was planned earlier in the year may be due in part to the substitution of wheat on barley land under the feed grain and wheat programs. Weather uncertainty in the Northern Plains also may be a factor for both barley and oats; farmers who cannot seed these crops because of weather frequently plant corn, soybeans, or other crops instead.

Feed Grain Signup Reaches 39 Million Acres

Farmers had signed up to divert close to 39 million acres of 1970 feed grain crops to soil-conserving purposes through April 3 (preliminary total), 1.8 million less than in the same reporting period of 1969. Last year a total of 41.3 million acres was signed for diversion and farmers diverted 39.1 million or about 95% of the acreage intended for diversion. This was about the same as in other recent years when farmers diverted from 94% to 96% of the intended diversion (table 3).

The Department recently extended the signup period (to April 3) for the 11 Northern Plains and Northwestern States: Minnesota, Iowa, North and South Dakota, Nebraska, Kansas, Colorado, Montana, Idaho, Oregon, Washington, and a 1-week extension (to March 27) for Oklahoma. In all other States the signup period ended March 20. The acreage signed for diversion was increased about 2.6 million acres in the last weekly reporting period, compared with 1.8 million in the comparable period of 1969. Last year the signup increased another 0.6 million acres in the final diversion report.

The combined base acreage of corn, sorghums and barley on the farms signing up through April 3 amounted to 90.3 million acres and was only 2% less than the base on enrolled farms in the same period of 1969. The acreage intended for diversion is 43.1% of the base acreage, indicating that farmers plan to divert a slightly smaller percentage of their base this year than in 1969 when about 44% of the base was diverted. The corn base on enrolled farms was about 3% less than last year, while sorghum and barley bases on enrolled farms were virtually the same.

		Final signup	Preliminary through April 3	
		1969	1969	1970
Farms Enrolled	Thous.	1,662	1,645	1,592
Base acreage on enrolled farms				
Corn	Mil.	61.3	60.4	58.6
Sorghums	"	19.5	19.3	19.2
Barley	"	13.2	12.6	12.5
Total	"	94.0	92.3	90.3
Acreage signed for diversion 1/	"	41.3	40.7	38.9
Diversion as a % of base	Pct.	43.9	44.1	43.1

1/ Not reported by grains.

1969/70 DEVELOPMENTS

CORN

Corn Market Quiet

The corn market was quiet during late winter and early spring, following a seasonal price rise from November to January. Even price support activity and planting intentions by farmers have had little effect on old and new crop contract prices. Sellers and buyers seem to be taking a wait-and-see attitude. Although feed grain demand is strong, there seems to be a cautious undertow due to uncertainty of 1969/70 utilization, prospective larger 1970 acreage, and the recent slowdown in the national economy.

Chicago corn prices

[No. 2 Yellow]

	1968/69	1969/70
	Dol. per bu.	
Oct.	1.08	1.18
Nov.	1.15	1.18
Dec.	1.16	1.19
Jan.	1.20	1.26
Feb.	1.18	1.26
Mar. 6	1.17	1.26
13	1.17	1.25
20	1.16	1.25
27	1.20	1.22
Apr.	1.23	
May	1.32	
June	1.32	
July	1.28	
Aug.	1.29	
Sept.	1.25	
Av.	1.22	

Prices continue higher this season than last, with No. 2 Yellow at Chicago averaging $1.24 in March, 6¢ above a year ago. During October-March, prices received by farmers averaged $1.11 a bushel, 6¢ higher than in that period of 1968/69. The larger 1969 crop is expected to be in close balance with requirements. With continued strong demand, some further seasonal rise in price may occur between now and midsummer. In April-September, however, prices are not expected to average much, if any, above the Chicago price of $1.28 a bushel in that period of 1969.

Corn: Quantities resealed on farms March 1, 1970, loan rates and accrued interest by crops, 1964-69

Crop of	Under reseal	Loan rate	Interest 1/	Total
	Mil. bu.	- - - Dol.	- - - -	
1964	32	1.10	.21	1.31
1965	36	1.05	.18	1.23
1966	79	1.00	.13	1.13
1967	130	1.05	.10	1.15
1968	120	1.05	.06	1.11
1969	2/353	1.05	.03	1.08
	March 15 farm price $1.13			

1/ Approximate accrued interest through June 30, 1970; assumes that the corn was placed under loan during the harvest period. Accrued interest would be slightly less for corn placed under loan later in the marketing season. 2/ Under loan on March 1.

Price Support Activity Near Last Year

Prices are running higher than last year relative to the loan level, but price support activity is running about the same as last year's level. By the first of March, producers had put 366 million bushels of 1969 corn under loan, virtually the same as last year. Heavy price support activity has contributed significantly to the season's higher price level. Loan repayments of 12 million bushels through February were 3 million more than a year ago. As the season progresses, loan redemptions probably will pick up, tending to bar any unusually sharp price rise between now and the start of the fall harvest.

CCC Sales Mostly Nonstorable Corn

Commodity Credit Corporation corn sales from October 1 through March 27 totaled nearly 25 million bushels. About 23 million was nonstorable or subject to going out of condition. In late March, CCC owned 293 million bushels, 36 million more than a year ago.

Export Prospects Weaken

U.S. corn exports for the entire 1969/70 season now are estimated at 550 million bushels, up a little from the 536 million in 1968/69.

U.S. corn exports are colliding with considerable competition from Argentine and South African crops being harvested this spring. Argentine corn production for 1970 is estimated at 358 million bushels, 86 million more than last year. This is considerably larger than the 5-year average harvest of around 235 million (table 13).

The South African corn crop is now placed in the area of 300 million bushels, substantially larger than the 194-209 million bushel crops in 1968 and 1969. There is considerably more variation in South African corn crops than Argentina's--a normal South African crop may be considered at around 225 million bushels.

The 1970 corn crops from these two countries will vigorously compete with U.S. exports this spring and summer. U.S. corn exports during October-March were quite heavy at 330 million bushels. But the rate is expected to drop substantially from this high level during April-September--the last half of the marketing season.

Thus far this season, there have been heavier shipments to Japan, Spain and East Germany. Shipments to the United Kingdom (a principal buyer of U.S. corn) are holding up near last year's pace. The European Community has taken less.

Corn exports, cumulative

	1968/69	1969/70
	Mil. bu.	
Oct.	41	56
Nov.	97	137
Dec.	158 [DS]	186
Jan.	161 [DS]	228
Feb.	178 [DS]	280
Mar.	230 [DS]	1/330
Apr.	269	
May	318	
June	363	
July	415	
Aug.	470	
Sept.	536	
Total	536	

1/ Mar. est.

[DS] - Dock Strike, Dec. 20-Mar. 20.

GRAIN SORGHUM

Prices Considerably Above Last Year

A very strong domestic demand has held 1969 grain sorghum prices well above those of a year ago. At Kansas City, No. 2 Yellow milo during October-March averaged $2.06 a cwt., compared with $1.91 last year. Prices this year also have been more stable than last, although they have weakened some since October. Last fall, prices at Kansas City reached a monthly high of $2.08 a cwt. and in late March were running around $2.00.

Strong demand for cattle feeding will continue to give ~~strength to~~ prices this spring and summer. Cattle feeding continues to expand, especially in major milo producing areas. As of March 1, cattle numbers on feed in ~~the~~ Southwest and Far West were up more than 10% from a year ago. Numbers on feed in Texas were up 25%, Colorado up 16%, California and Arizona up 14%.

Kansas City milo prices

[No. 2 Yellow]

	1968/69	1969/70
	Dol. per cwt.	
Oct.	1.81	2.08
Nov.	1.88	2.08
Dec.	1.90	2.06
Jan.	1.96	2.06
Feb.	1.95	2.04
Mar. 6	1.94	2.00
13	1.94	1.99
20	1.94	2.00
27	1.94	2.01
Apr.	1.98	
May	2.02	
June	2.04	
July	2.07	
Aug.	2.11	
Sept.	2.08	
Av.	2.00	

Loan Activity Down Sharply

Through February, producers had placed 37 million bushels of sorghum under loan, only about half the year-earlier volume. With prices holding well above the loan rate, producers have much less incentive to put their crops under loan. So loan activity in 1969/70 is almost certain to fall well short of last year's total of 74 million bushels; more of the crop will be needed for domestic feeding.

CCC Sorghum Sales Up

Commodity Credit Corporation's sorghum sales thus far this season are running well above last year's negligible sales. Through late March, total CCC dispositions amounted to 43 million bushels, compared with less than a million a year ago. About 31 million bushels or nearly three-fourths of the total went into export. However, because of transportation problems (rail car shortages, among other problems) sorghum movement to ports has been hampered.

In late March, CCC held 156 million bushels of sorghum in its uncommitted inventory.

Sorghum under reseal from 1964 through 1968 crops on March 1 totaled 53 million bushels. About 34 million of this was in farm storage, while about 20 million of 1967 and 1968 crop sorghums was in commercial storage. Reseal loans in 1964, 1965, and 1966 will not be extended beyond their June 30 and July 31 maturity dates (depending on areas). Holdings under reseal programs for these three crops totaled about 20 million bushels. Price and redemption costs suggest that most of the 1964 and 1965 crops (16 million bushels) will be delivered to CCC, while farmers likely will redeem most of the 4 million bushels from the 1966 crop.

Grain sorghum exports, cumulative

	1968/69	1969/70
	Mil. bu.	
Oct.	8	8
Nov.	17	19
Dec.	28 [DS]	29
Jan.	32 [DS]	43
Feb.	36 [DS]	54
Mar.	44 [DS]	1/64
Apr.	52	
May	58	
June	64	
July	82	
Aug.	98	
Sept.	106	
Total	106	

1/ Mar. est.

[DS] - Dock Strike, Dec. 20-Mar. 20.

Exports May Slip

Sorghum exports during October-March totaled approximately 64 million bushels, up 20 million from the small volume a year earlier. Last year the

Gulf Coast dock strike in December-March sharply reduced exports. For the 1969/70 season, exports are expected to total around 80 million bushels, about 20 million below those in 1968/69. This would mean much smaller overseas shipments for April-September when movement from the big Argentine sorghum crop will be heavy.

Sorghum prices relative to corn have dropped. In late March, sorghum prices at the Gulf were 92% of corn prices; last fall and winter they were about the same as corn.

OATS

Prices Lowest in Many Years

The oat market has been very quiet and prices have shown little inclination to teeter one way or other during recent weeks. After climbing 6¢ from August to October, Minneapolis prices of No. 2 White hung close to 66¢ a bushel during much of the winter, then weakened slightly in March. The farm price in March averaged 58¢ a bushel, 5¢ below the loan rate.

Despite the prices being attractive to buyers, oat use during the first half of the marketing year was up only 13 million bushels over a year earlier. With supplies well in excess of requirements, and with relatively good supplies of other feeds, buyers have good flexibility in their choice of feeds.

Even vigorous activity in the loan program has not tightened "free" supplies enough to materially raise prices. Through February, producers had entered 137 million bushels of oats in the loan program. At 14% of the crop, this was the largest volume ever for the 8-month period, assuring record reseal loan entries for the year. The little strength given to oat prices since last summer may be largely attributed to the heavy price support activity.

Minneapolis oat prices

[No. 2 White]

	1968/69	1969/70
	Cents per bu.	
July	.66	.60
Aug.	.60	.60
Sept.	.63	.62
Oct.	.64	.65
Nov.	.69	.66
Dec.	.67	.66
Jan.	.70	.66
Feb.	.69	.65
Mar. 6	.66	.63
13	.67	.63
20	.65	.64
27	.66	.64
Apr.	.67	
May	.67	
June	.61	
Av.	.64	

BARLEY

Prices Lower This Year

Barley prices (No. 3 Minneapolis) reached a seasonal low of $1.00 a bushel last August. In September they rose to $1.06 and since have lingered around this level. During September-March last year they also were stable but averaged around 10¢ a bushel higher than in the current season. Large "free" stocks relative to expected needs, along with producers' plans for a 5% increase in 1970 acreage, are bearish factors in the barley market for this spring and summer.

Minneapolis barley prices

[No. 3]

	1968/69	1969/70
	Dol. per bu.	
July	1.07	1.09
Aug.	1.05	1.00
Sept.	1.20	1.06
Oct.	1.18	1.08
Nov.	1.15	1.07
Dec.	1.14	1.07
Jan.	1.19	1.06
Feb.	1.18	1.06
Mar. 6	1.18	1.05
13	1.16	1.07
20	1.16	1.08
27	1.17	1.08
Apr.	1.17	
May	1.19	
June	1.14	
Av.	1.15	

Loan Activity Down Sharply

With farm prices averaging nearer the loan level than a year ago, producers are placing much less barley under loan. Through February, 47 million bushels were entered under loan, 59 million less than on that date a year ago. Since last July the farm price has averaged 87¢, or 4¢ over the loan rate. The 1969 loan rate of 83¢ was lowered 7¢ from 1968. But unlike 1968, the total support included price support payment of 20¢ a bushel. The average payment earned by program participants was about 15¢ per bushel produced.

CCC Barley Inventory Gains

CCC barley holdings the last of March were 49 million bushels, the highest level since the early 1960's. Most barley currently owned by CCC came from the 1968 crop through loan default. So far this season, CCC barley sales have been negligible, totaling only about a million bushels.

CCC Barley Offered for Export

The Department of Agriculture announced on March 27 CCC-owned barley will be offered for export sale at competitive world prices. Barley will be offered for export prior to August 31, 1970, FOB vessel from the Duluth/Superior ports. The barley can be exported to all countries currently eligible for U.S. grain purchases, except those in the European Economic Community. Bids will be received by Export Marketing Service, Washington, D.C., through the Kansas City ASCS Commodity Office.

Barley exports, cumulative

	1968/69	1969/70
	Mil. bu.	
July	1	[1]
Aug.	3	[1]
Sept.	3	1
Oct.	4	2
Nov.	6	2
Dec.	7 [DS]	2
Jan.	7 [DS]	2
Feb.	7 [DS]	2
Mar.	8 [DS]	[2] 2
Apr.	10	
May	12	
June	13	
Total	13	

[1] Less than 500,000 bushels.
[2] Mar. est.

[DS] - Dock Strike, Dec. 20-Mar. 20.

Barley exports have been at a 25 year low so far this year, totaling less than 3 million bushels (including malt) during July-March. U.S. barley has met with stiff competition from large foreign supplies this season. While it is difficult to estimate how much grain will be exported from CCC stocks, this action could increase our exports from the low movement so far this year.

HIGH-PROTEIN FEED

Demand Strong for High-protein Feeds

This is proving to be an unusual year for the protein feed industry. Feeding of the protein feeds now is expected to hit the 19½-million-ton mark, representing a 5% or 0.9 million ton increase over 1968/69. This is double the average annual rate of increase during 1960-68. More protein-consuming animals and favorable livestock-feed price ratios are generating increased feed requirements at liberal feeding rates. The feeding rate during October-February was running close to the heavy rate of a year ago.

SOYBEAN MEAL

More to be Fed Than Expected

Soybean meal feeding is running heavier than was expected last fall. The feed industry is having one of its strongest demand seasons in many years. For October-February, supplies of most of the protein feeds were down from a year ago or only holding their own. Here are some examples:

Cottonseed meal, down 4%
Linseed meal, down 28%
Tankage and meat meal, unchanged
Fish meal, down 59%
Gluten feed and meal, unchanged
Brewers' dried grains, up 9%
Distillers' dried grains, unchanged

With this unusual situation, soybean meal becomes the chief beneficiary. This was reflected by market prices rising to over $90 per ton during periods of December and January. Despite plentiful bean supplies, processors were unable to crush fast enough to meet demand generated by --

...more protein-consuming livestock
...very favorable feed-price ratios for livestock and poultry, and
...a severe winter in many of the North Central and Northeastern States.

For the 1969/70 season, bean processors are expected to produce 16.5 million tons of meal, about 2 million more than a year earlier. Production during the first 5 months was up 1.2 million tons. Domestic feeding probably will reach 13 million tons for an increase of around 1½ million over 1968.69.

Production and domestic feeding of soybean meal

[1,000 tons]

	Production		Feeding	
	1968/1969	1969/1970	1968/1969	1969/1970
Oct.	1,289	1,456	1,109	1,164
Nov.	1,314	1,460	1,016	1,079
Dec.	1,234	1,498	848	1,129
Jan.	1,171	1,475	1,094	1,096
Feb.	1,060	1,383	1,012	1,078
Tot.	6,068	7,272	5,079	5,546
Season	14,581	1/16,550	11,525	1/13,000

1/ March 1970 forecast

Prices Fall

Soybean meal prices have nosedived from very high levels in December and January. At Decatur, meal in late March and early April was being quoted at around $70 a ton, about $17 below the January average. Prices this spring are expected to stay in the low $70's, as processors with plenty of available beans are catching up with protein feed demand. But if cold weather persists into this spring, it will support continued strong protein feed demand. After a month's shutdown, Peru's fishing resumed in mid-March, pointing to increasing competition from fish meal.

COTTONSEED MEAL

Smaller Supplies; Higher Prices

Cottonseed meal feeding in October-September 1969/70 will likely fall around 200,000 tons, or nearly 10% below the 2.1 million fed in 1968/69. A smaller 1969 cotton crop yielded less cottonseed supplies for crushing. Acreage intentions for 1970-crop cotton are reported at 12.2 million, up from 11.9 million planted in 1969.

With reduced supplies the rest of 1969/70, coupled with a good demand, cottonseed meal prices probably will average well above last year's $65 a ton at Memphis. Prices jumped from a low of $63 last October to $88 in January. But in the face of weakening soybean meal prices, cottonseed meal dropped to $62 by early April. With continued strong demand from cattle feeders in the South, prices this spring may firm up some.

Production and domestic feeding of cottonseed meal

[1,000 tons]

	Production		Feeding	
	1968/1969	1969/1970	1968/1969	1969/1970
Oct.	232	222	212	226
Nov.	240	230	228	212
Dec.	247	240	260	243
Jan.	255	232	252	223
Feb.	216	218	192	192
Tot.	1,190	1,142	1,144	1,096
Season	2,029	1/1,900	2,086	1/1,900

1/ March 1970 forecast.

FISH MEAL

Short Supplies Accompanied by High Prices

Due to an international fish meal shortage, U.S. fish meal supplies in 1969/70 most likely will drop substantially below the 818,000 tons in 1968/69. Much of the shortage has been brought on by reduced output in Peru--the world's largest supplier of fish meal. However, production in other countries also has been down or little changed in the face of an exceptionally strong demand situation. Here is how 1969 (calendar year) fish meal production compares with 1968 in principal fish meal exporting countries.

	1,000 metric tons	Change from 1968
Peru	1,611	- 16%
South Africa	401	- 14%
Norway	309	- 23%
Chile	129	- 33%
Iceland	1/64	+ 21%
Angola	1/58	+ 5%
Total	2,572	- 17

1/ Partial year.

Ordinarily, the United States imports well over half of its fish meal supplies, with the bulk from Peru. After a month's close, Peru has resumed its fishing season which should still turn out well. With high world prices, fishermen in the Southern Hemisphere countries will strive for gains in their catches. If this occurs, it would ease some of the tightness in the world situation.

Prices Drop, But Still High

New York fish meal prices in early April were being quoted at $195 a ton, $55 above a year ago. At times last fall and winter, prices were averaging over $200 a ton, but subsequently dropped to $186 in February, with good catches being made by Peruvian fishermen in December and January. The recent price rise probably is due to the February 11 to March 17 closing of the fishing season by the Peruvian Government to conserve fishery resources. Prices will probably drop again this spring as both the U.S. and international fish meal supplies increase. The U.S. fishing season got underway around the first of April.

TANKAGE AND MEAT MEAL

Supplies Little Changed; Prices Erratic

Tankge and meat meal production in 1969/70 probably will not differ greatly from last year's 2 million tons. Output during October-February was 850,000 tons, virtually the same as in the corresponding period of 1968/69.

Tankage and meat meal prices have pretty much followed those of other protein feeds--moving up rather sharply from low levels in the fall to high levels in the winter. At Chicago, tankage and meat meal prices jumped from around $94 a ton in October to $134 in February. By early April, tankage had dropped to $108 per ton and meat meal to $98.

GRAIN PROTEINS

Production Unchanged

Combined production of the grain protein feeds (gluten feed and meal, and brewers' and distillers' dried grains) so far in 1969/70 is running about the same as a year ago. Production of these byproduct feeds for the entire season likely will be close to last year. Output is largely predetermined by demand for the industry's primary products, such as corn starch, sugar, syrup, oil, beer, alcohol, and distilled spirits.

Even though production has expanded in recent years, the industry's return from the grain proteins has been good. During October-March, grain protein feed prices averaged 7% above last year, rising to a high of 35% above the 1957-59 average in February. Like other protein feeds, prices of the grain proteins have dropped from the February high: In early April, gluten feed at Chicago was off $18; brewers' dried grains at Milwaukee, down $22; and distillers' dried grains, down $2.

The 1970 issues of the Feed Situation are scheduled to be available February 6, April 13, May 28, August 28 and November 30.

Summaries of these issues are scheduled for release after 3:00 p.m. by the Press Service, Office of Information, USDA on January 29, April 6, May 21, August 21 and November 20.

FEED PRICE VARIATIONS - PAST AND PRESENT

by Malcolm Clough

ABSTRACT: *Greater attention to feed costs and the use of computers to determine low-cost rations would be expected to reduce the variations between feed prices. Quarterly price variations between corn, soybean meal, and other selected feeds were compared for the past 5 years with those of a similar period 15 years earlier. Differences between soybean meal and the other high-protein feeds were less than in the earlier period. But the changes were much less consistent for corn in comparison with other lower protein feeds, with some of the price variations even greater than in the earlier period.*

KEY WORDS: *Feed price variations, feed costs, lower protein and high-protein feeds.*

Over the past 20 years, feed manufacturers and livestock and poultry producers have given increasing attention to ways of lowering feed costs. Variations in feed prices provide almost continuous opportunities to obtain lower cost livestock rations. The more responsive that feed buyers are to changes in feed prices, the more promptly we would expect prices of feedstuffs to adjust to reflect their relative feeding value. The use of computers to determine least-cost feed combinations enables rapid shifts by feed manufacturers to obtain most economical rations. Such developments would be expected to reduce the variations between prices of individual feeds over a period of years.

In this study, feed price variations during the past 5 years are compared with those for a similar 5-year period 15 years earlier to determine how much these variations have changed through the years. Corn is taken as the basic lower protein feed and soybean meal as the basic high-protein feed. Quarterly price variations between corn and 7 selected feeds and between soybean meal and 5 high-protein feeds are computed for both periods. These comparisons indicate reductions in price variations between soybean meal and each of the other high-protein feeds. But changes between corn and the other lower protein feeds were much less consistent. Variations were reduced for 4 of the feeds but were larger for 3.

A number of factors contribute to variations in feed prices.

(1) Changes in supplies appear to be a major cause.

(2) Changes in the demand for feed also may cause price differences. Demand changes, for individual feeds, usually are caused by changes in the number of the different kinds of livestock or in feeding practices. These usually occur over a number of years. For example, expanding demand for soybean meal over the past 20 years has lifted prices in relation to most other feeds despite increasing production.

(3) Price variations may result from feed buyers being unaware of or unresponsive to the cost difference among feed ingredients.

(4) Changes in the quality of feeds can also affect the price relationships.

(5) Government programs also influence feed prices, since they tend to stabilize prices of feed grains.

The nearer feeds are together in nutritive value and other characteristics, the closer their prices move together. For example, because of their similarities, hominy feed prices do not vary greatly from corn prices. On the other hand, prices vary widely for feeds dissimilar in nutritive value and other characteristics, such as soybean meal and fish meal.

CORN PRICES IN RELATION TO OTHER FEEDS

For the purpose of these comparisons, the price of corn was taken as the basic feed grain (or lower protein feed). The feed prices per ton were averaged by quarters to avoid sharp month-to-month changes. Chicago prices were used wherever possible. Where the Chicago prices were not available for the two periods, prices at other important Midwestern markets were used. Quarterly corn prices were divided into prices of the other 3 feed grains and 4 byproduct feeds to

Table 8.--Prices of selected feeds as related to prices of corn and soybean meal, by quarters, 1948-52 and 1964-68

Feed and market	1948-52				1964-68			
	Mean and range in percentages			Standard deviation	Mean and range in percentages			Standard deviation
	Low	Mean	High		Low	Mean	High	
	Percent							
Prices of specified feeds as related to corn (No. 2 Yellow at Chicago) 1/								
Sorghum grain, No. 2 Yellow, Kansas City	74	88	102	8.1	81	89	101	5.3
Oats, No. 2 White, Chicago	82	93	105	7.4	84	101	123	9.3
Barley, No. 3 White, Minneapolis	81	103	135	13.6	85	104	117	8.0
Wheat middlings, Chicago	84	102	122	8.7	89	102	123	10.6
Hominy feed, Chicago	83	90	94	3.2	85	95	104	4.3
Gluten feed, Chicago	68	89	105	11.9	87	101	120	10.4
Molasses, Kansas City	42	69	108	23.8	50	69	90	13.1
Prices of specified protein feeds as related to soybean meal (44% protein at Chicago) 1/								
Cottonseed meal, 41%, Memphis	71	88	108	9.3	75	87	100	6.9
Linseed meal, 34%, Chicago	78	102	121	11.5	88	95	105	4.7
Meat meal, 50%, Chicago	100	142	170	22.6	104	115	135	7.5
Fish meal, 60%, Buffalo	127	197	303	43.5	148	187	229	25.1
Gluten feed, 21%, Chicago	56	67	82	6.8	44	57	65	5.8

1/ Prices of the specified feeds, per ton, divided by the price of corn or soybean meal, per ton; see tables 9 to 11 for quarterly prices and computations.

obtain prices of these feeds relative to corn (tables 9 and 10). These price comparisons are summarized in table 8, which shows the average percentages, the ranges, and standard deviations of the percentages.

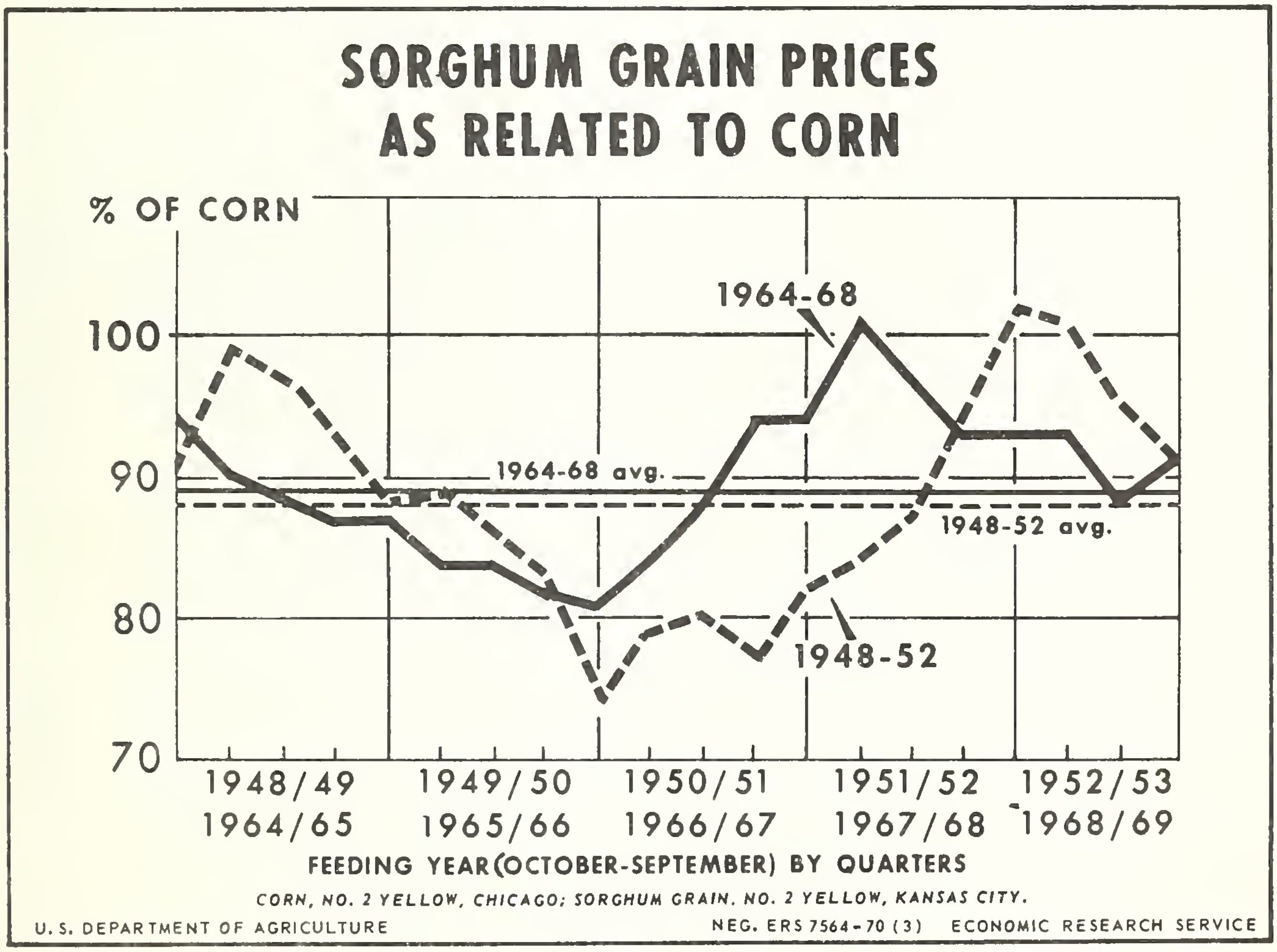
These comparisons do not indicate material reductions in price variations of the other feeds as related to corn since 1948-52, except for barley and molasses. The standard deviation of barley prices (as a percent of corn) was reduced from nearly 14% in 1948-52 to 8% in 1964-68 and for molasses from 24% to 13%. The variations for sorghum grain and gluten feed were a little less, while price variations of oats, wheat middlings and hominy feed were a little larger.

These comparisons also show the changes in the level of the 7 feeds in relation to corn. Oats, hominy feed, and gluten feed were higher in relation to corn during 1964-68 than in the earlier period. For oats, this apparently was due to the rather marked reduction in oat supplies, especially during 1964-67 as compared with 15 years ago.

Gluten feed was compared with corn as well as with soybean meal, since it competes with both of these feeds. The rise in gluten feed prices relative to corn probably resulted from the general increase in the demand for protein feed over the past 15 years.

Sorghum Grain and Corn Prices

Sorghum grain and corn are considered quite similar in nutritive value and other characteristics, with sorghum grain generally rated about 5% lower than corn in feeding value. The Kansas City price of sorghum grain was used since prices were not available at Chicago. The sorghum grain price averaged about 89% of



corn during 1964-68, practically the same as 15 years ago. The lower sorghum grain price reflected not only a lower feeding value but also preference of feeders and differences in locations of the main corn and sorghum producing areas. In the past 3 years, sorghum grain prices have increased relative to corn, due largely to the increased demand from cattle feeders. Variations between the price of corn and sorghums have been a little less in recent years than in 1948-52. The standard deviation of the quarterly percentages was reduced from 8.1 in 1948-52 to 5.3 in 1964-68 (table 8).

Corn and grain sorghum feeding and prices

Year beg. Oct.	Fed to livestock			Grain sorghum price as a % of corn 1/
		Grain sorghum		
	Corn	Quantity	% of corn	
	Mil. tons		Pct.	Pct.
1948	63.2	2.0	3.2	95
1949	71.2	1.8	2.5	86
1950	69.5	4.0	5.8	78
1951	71.5	3.2	4.5	87
1952	64.7	2.2	3.4	97
1964	82.8	11.5	13.9	90
1965	93.7	15.9	17.0	84
1966	92.0	16.8	18.3	87
1967	95.8	14.9	15.6	96
1968	99.0	17.4	17.6	91

1/ For prices and computation, see table 9.

The increase in grain sorghum production since 1950 has not materially changed its average price relative to corn, even though the quantity fed increased from around 4% of corn in 1948-52 to 16% in 1964-68. Year-to-year variations in supplies, however, apparently are important in determining price deviations relative to corn. For example, with the sharp increase in supplies and feeding in 1965/66, sorghum prices dropped to 84% of corn. With reduced supplies in 1967, prices rose to 96% of corn--the highest in recent years. A marked increase in demand for sorghum grain for cattle feeding in the Southwest in recent years also has affected these price relationships.

Oat and Corn Prices

The price of oats averaged nearly 10% higher in relation to corn during the past 5 years than during 1948-52. The increase apparently was due largely to the reduction in oat supplies. The tonnage of oats fed averaged 28% of corn in the earlier period, but in recent years only about 13%.

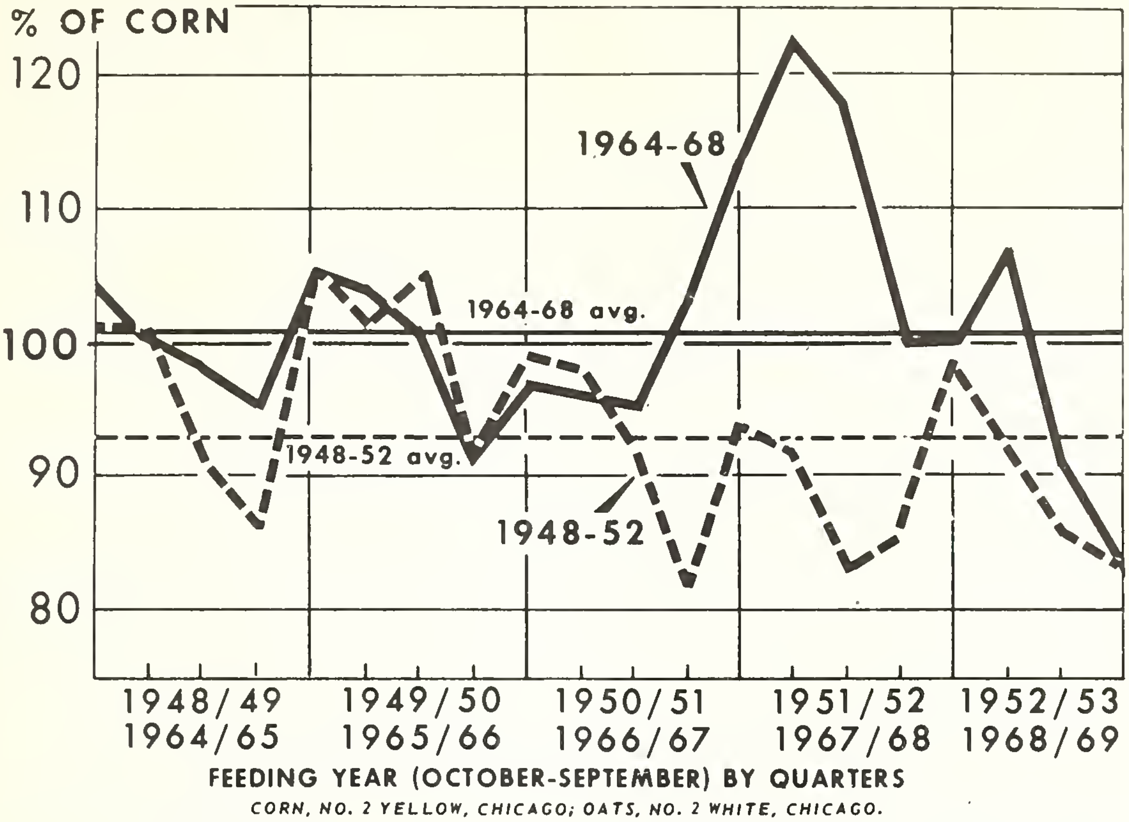
In both periods, oat prices also were influenced by year-to-year changes in supplies. The comparatively small oat supply in 1967/68 pushed oat prices to 114% of corn. From that high level, oat prices dropped sharply with the big 1968 crop, falling to an average of 95% in 1968/69. Oat prices in the past 5 years have shown a little greater variation in relation to corn than they did 15 years ago, with the standard deviation increasing from 7.4 in 1948-52 to 9.3 in 1964-68.

Corn and oats feeding and prices

Year beg. Oct.	Fed to livestock			Oat price as a % of corn 1/
		Oats		
	Corn	Quantity	% of corn	
	Mil. tons		Pct.	Pct.
1948	63.2	19.7	31.2	95
1949	71.2	17.9	25.1	101
1950	69.5	19.3	27.8	93
1951	71.5	19.6	27.4	88
1952	64.7	18.0	27.8	90
1964	82.8	11.9	14.4	99
1965	93.7	11.9	12.7	100
1966	92.0	11.7	12.7	98
1967	95.8	10.8	11.3	114
1968	99.0	11.5	11.6	95

1/ For prices and computation, see table 9.

OAT PRICES AS RELATED TO CORN



CORN, NO. 2 YELLOW, CHICAGO; OATS, NO. 2 WHITE, CHICAGO.

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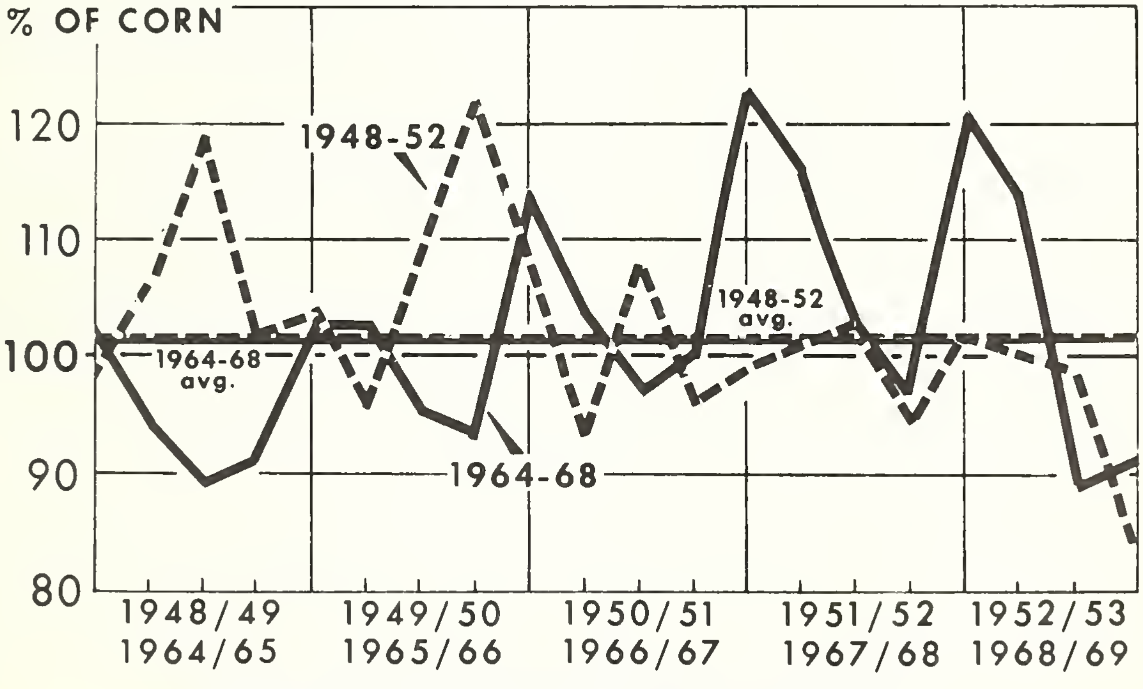
WHEAT MIDDLING PRICES AS RELATED TO CORN



CORN, NO. 2 YELLOW, CHICAGO; WHEAT MIDDLINGS, CHICAGO.

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Wheat Middling and Corn Prices

The price of wheat middlings averaged 102% of corn in the past 5 years, the same as in 1948-52. While prices varied considerably in relation to corn in both periods, variations were slightly greater during 1964-68. In the past 5 years, much of the variation in wheat middling prices (as related to corn) resulted from differences in the seasonal variation of the 2 feeds. Prices of wheat middlings, seasonally low during the spring and summer months, advanced with the increasing demand for these feeds during the fall and winter. This resulted in wheat middling prices falling somewhat below the price of corn during the summer and then rising well above corn prices in the fall and winter. The variation was especially pronounced in 1968/69 when the price of wheat middlings dropped from 121% of corn in October-December to 89% of corn in April-June.

RELATION OF SOYBEAN MEAL TO OTHER HIGH-PROTEIN FEED PRICES

Using the price of soybean meal (44% protein, Chicago) as a base, prices of cottonseed meal, linseed meal, meat meal, fish meal and gluten feed were compared with soybean meal (table 11). Chicago prices were used for 3 of the feeds where they were reported for both periods, but it was necessary to use Memphis for cottonseed meal and Buffalo for fish meal. Prices of each of these feeds declined during the past 15 years in relation to soybean meal. The change was only slight for cottonseed meal, in contrast to a pronounced drop for meat meal from 142% of soybean meal in 1948-52 to 115% in 1964-68 (table 8).

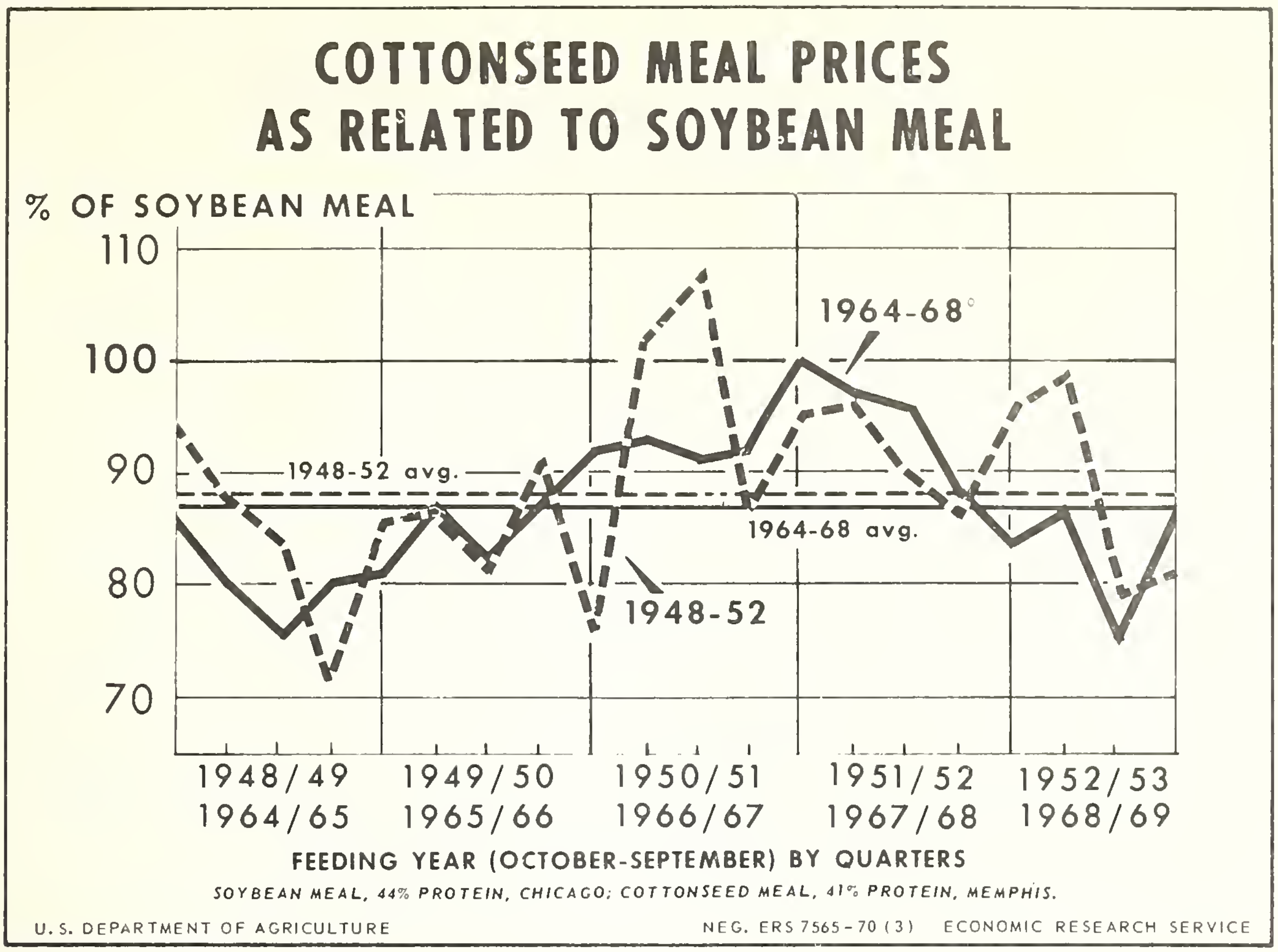
Price variations for each of the protein feeds (relative to soybean meal) were less pronounced in the past 5 years than in 1948-52. The narrowing of the price spreads may be due in part to the fact that feed manufacturers watch feed ingredient prices more closely now than they did 20 years ago, using computers to determine lowest cost rations. It may also result in part from larger and more stable supplies of some of the high-protein feeds. Supplies of fish meal and meat meal available for feeding have increased at a slightly faster rate than soybean meal over the past 20 years. Supplies of the other 3 protein feeds, however, are now considerably smaller in relation to soybean meal than during 1948-52. The greatest price variation in both periods was between fish meal and soybean meal due to the differences in the characteristics of feeds. On the other hand, variations in linseed meal and gluten feed prices relative to soybean meal were comparatively small, especially for the last 5 years.

Cottonseed Meal and Soybean Meal Prices

Cottonseed meal prices in recent years averaged about as high in relation to soybean meal as 15 years ago. The maintenance of this relationship, despite expanding demand for soybean meal, apparently reflected the relatively smaller supplies of cottonseed meal. The tonnage of cottonseed meal fed to livestock, averaging 47% of the soybean meal tonnage during 1948-52, dropped to only 20% during 1964-68.

In both periods, prices were sensitive to changes in supplies. For example, when cottonseed meal supplies available for feeding dropped 45% from 1964 to 1967, cottonseed meal prices rose to 95% of soybean meal, up sharply from the 80% of 3 years earlier. Similar variations in supplies and prices occurred in 1948-52.

The rather wide swings in the relationship between cottonseed meal and soybean meal is due in part to the differences in areas of production and feeding. Since cottonseed meal is produced and fed largely in the South, it is less competitive with soybean meal than if both were available in volume in the same areas.



COTTONSEED MEAL PRICES AS RELATED TO SOYBEAN MEAL

SOYBEAN MEAL, 44% PROTEIN, CHICAGO; COTTONSEED MEAL, 41% PROTEIN, MEMPHIS.

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Differences in demand for cottonseed meal and soybean meal also influence the relative prices of the 2 feeds. Cottonseed meal is fed principally to dairy and beef cattle, while soybean meal is fed in volume to all types of livestock and poultry.

Meat Meal and Soybean Meal Prices

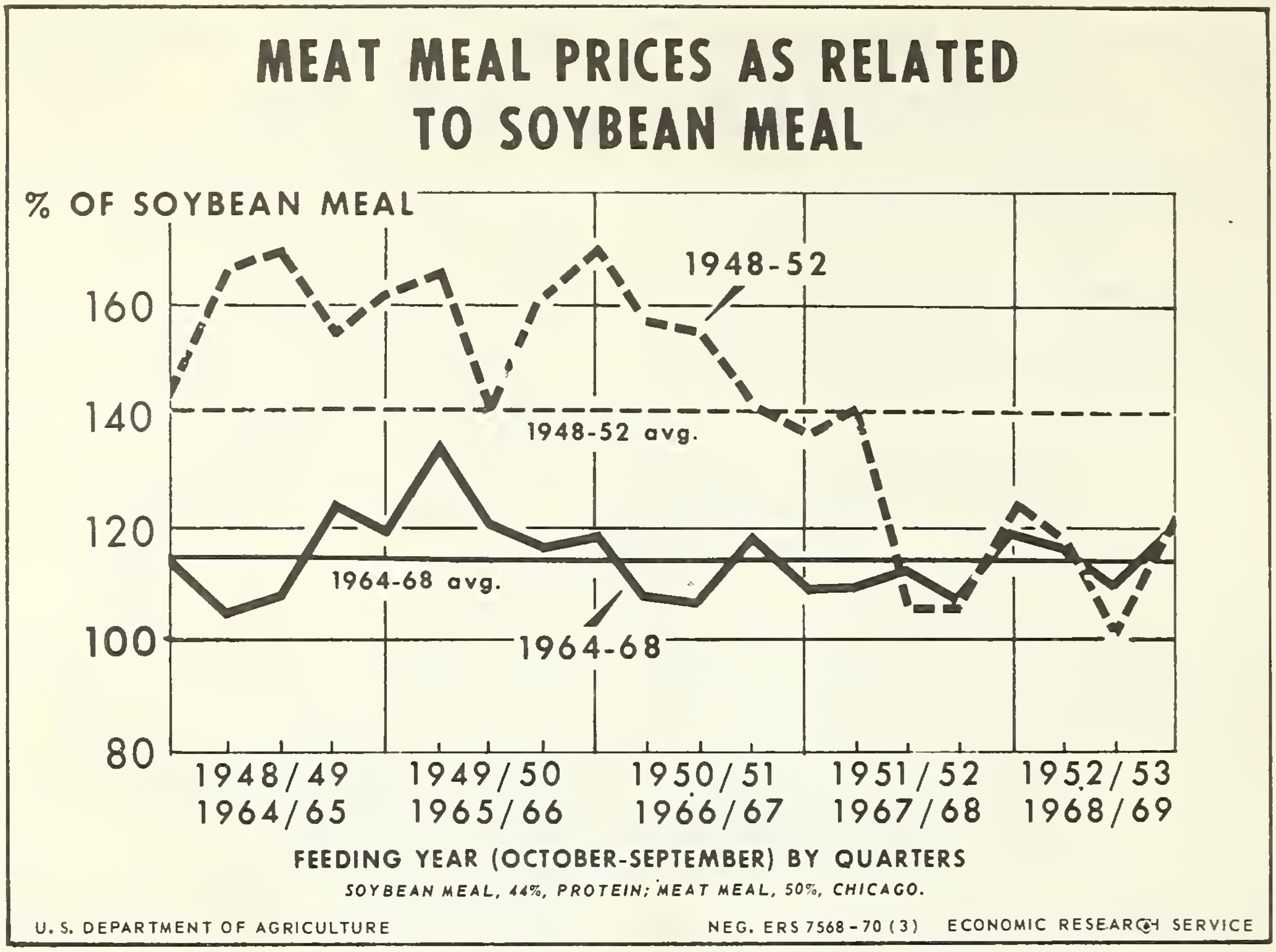
Meat meal prices dropped sharply in relation to soybean meal from an average of 142% of soybean meal in 1948-52 to only 115% in 1964-68. This may be due in part to the slightly greater gain in supplies of meat meal than soybean meal since the early 1950's. It also indicates an increasing demand for soybean meal relative to other protein feeds.

There was much less variation between prices of meat meal and soybean meal in the past 5 years than in the first 5-year period. The standard deviation of meat meal prices as a percentage of soybean meal declined from nearly 23% in 1948-52 to only about 8% in 1964-68.

Soybean meal and cottonseed meal feeding and prices

Year beg. Oct.	Fed to livestock: Soybean meal	Fed to livestock: Cottonseed meal: Quantity	Fed to livestock: Cottonseed meal: % of soybean meal	Cottonseed price as a % of soybean meal 1/
	1,000 tons	tons	Pct.	Pct.
1948	4,158	2,271	54.6	82
1949	4,517	2,382	52.7	86
1950	5,718	1,853	32.4	93
1951	5,640	2,650	47.0	91
1952	5,510	2,671	48.5	89
1964	9,236	2,680	29.0	80
1965	10,274	2,563	24.9	84
1966	10,820	1,755	16.2	93
1967	10,753	1,462	13.6	95
1968	11,525	2,086	18.1	83

1/ For prices and computation, see table 11.



Reduced price variations probably are due in part to more rapid substitution between the 2 feeds in recent years but may also reflect greater stability in supplies of the 2 feeds in the last 5 years.

Fish Meal and Soybean Meal Prices

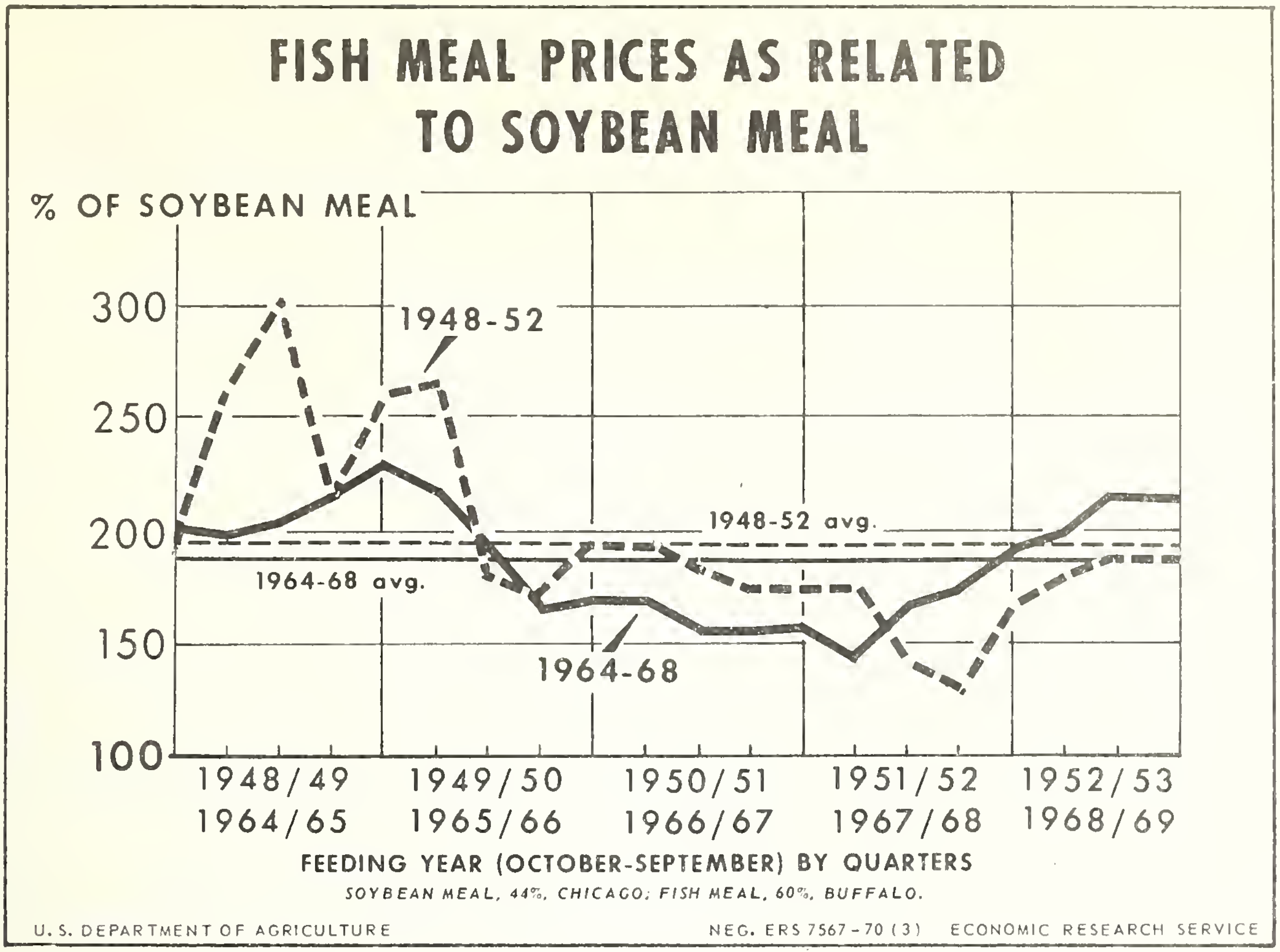
Because of basic differences in fish meal and soybean meal, price variations between the 2 feeds have been much greater than for any of the other feeds. As in the case of meat meal, however, the variation was much less pronounced in 1964-68 than in 1948-52. Fish meal prices averaged a little lower relative to soybean meal in the second 5-year period. This resulted partly from the much larger supplies of fish meal in recent years, especially in 1966/67 and 1967/68.

The marked variation in fish meal prices (relative to soybean meal) has been due to the greater variations in supplies than for most other feeds and

Soybean meal and meat meal feeding and prices

Year beg. Oct.	Fed to livestock			Meat meal price as a % of soybean meal 1/
	Soybean meal	Meat meal		
		Quantity	% of soybean meal	
	1,000 tons	1,000 tons	Pct.	Pct.
1948	4,158	854	21.5	158
1949	4,517	842	18.6	157
1950	5,718	882	15.4	155
1951	5,640	946	16.8	120
1952	5,510	1,032	18.7	116
1964	9,236	1,932	20.9	112
1965	10,274	1,961	19.1	123
1966	10,820	2,068	19.1	113
1967	10,753	2,059	19.1	109
1968	11,484	2,018	17.6	117

1/ For prices and computation, see table 11.



FISH MEAL PRICES AS RELATED TO SOYBEAN MEAL

SOYBEAN MEAL, 44%, CHICAGO; FISH MEAL, 60%, BUFFALO.

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to the special feeding qualities of fish meal. Fish meal is much higher in protein than soybean meal. It also contains what is known as the "fish factor," making minimum quantities highly desirable--especially in poultry feeds. If fish meal supplies increase substantially, the additional quantities will be added to livestock and poultry rations only at materially lower prices.

Changes in supplies caused wide price swings in both periods. In the last 5 years the 32% increase in fish meal supplies from 1965/66 to 1966/67 resulted in a sharp drop in fish meal prices in relation to soybean meal. Fish meal prices continued relatively low in 1967/68 as supplies increased another 31% to over 1 million tons. With much smaller supplies in the following year, fish meal prices advanced sharply, averaging over 200% of soybean meal during 1968/69 and the first half of 1969/70. Because of the special demand for fish meal, fish meal prices will continue to be sensitive to changes in supplies.

Soybean meal and fish meal feeding and prices

Year beg. Oct.	Fed to livestock: Soybean meal	Fish meal: Quantity	Fish meal: % of soybean meal	Fish meal price as a % of soybean meal 1/
	1,000 tons		Pct.	Pct.
1948	4,158	288	6.9	238
1949	4,517	324	7.2	216
1950	5,718	332	5.8	197
1951	5,640	438	7.8	153
1952	5,510	390	7.1	180
1964	9,236	625	6.8	204
1965	10,274	627	6.1	199
1966	10,820	827	7.6	163
1967	10,753	1,083	10.1	162
1968	11,484	818	7.1	205

1/ For prices and computation, see table 11.

Table 9.--Corn prices as related to other feed grains, per ton, by quarters, 1948-52 and 1964-68

Year and quarter	Corn, No. 2 Yellow, Chicago	Sorghum grain, No. 2 Yellow, Kansas City		Oats, No. 2 White, Chicago		Barley, No. 3 or better, Minneapolis	
	Dol.	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/
1948/49							
Oct.-Dec.	52.50	47.60	91	53.20	101	55.80	106
Jan.-Mar.	48.90	48.60	99	49.10	100	52.50	107
Apr.-June	49.30	47.60	97	45.00	91	50.00	101
July-Sept.	48.20	44.80	93	41.60	86	53.80	112
Yearly average	49.70	47.20	95	47.20	95	53.00	107
1949/50							
Oct.-Dec.	44.60	39.40	88	47.00	105	60.00	135
Jan.-Mar.	48.20	43.00	89	48.60	101	60.00	124
Apr.-June	53.20	45.60	86	56.10	105	64.60	121
July-Sept.	55.70	46.00	83	51.10	92	61.20	110
Yearly average	50.40	43.50	86	50.70	101	61.40	122
1950/51							
Oct.-Dec.	57.90	42.60	74	57.60	99	59.60	103
Jan.-Mar.	65.00	51.40	79	63.80	98	68.80	106
Apr.-June	63.60	50.80	80	58.50	92	57.50	90
July-Sept.	64.30	49.80	77	52.50	82	52.00	81
Yearly average	62.70	48.60	78	58.10	93	59.50	95
1951/52							
Oct.-Dec.	67.10	55.00	82	63.30	94	59.60	89
Jan.-Mar.	67.50	56.60	84	60.80	90	59.20	88
Apr.-June	66.10	57.40	87	55.10	83	55.80	84
July-Sept.	64.60	61.60	95	55.10	85	62.50	97
Yearly average	66.30	57.60	87	58.60	88	59.30	89
1952/53							
Oct.-Dec.	58.20	59.60	102	57.70	99	62.10	107
Jan.-Mar.	57.10	57.80	101	52.60	92	60.40	106
Apr.-June	57.10	54.00	95	49.20	86	56.70	99
July-Sept.	58.20	53.00	91	48.20	83	55.40	95
Yearly average	57.60	56.10	97	51.90	90	58.60	102
1948-52 average	57.30	50.60	88	53.30	93	58.40	103
1964/65							
Oct.-Dec.	44.30	41.50	94	46.10	104	45.40	102
Jan.-Mar.	46.80	42.20	90	46.80	100	47.50	101
Apr.-June	48.60	42.80	88	47.60	98	50.00	103
July-Sept.	47.10	40.90	87	44.90	95	47.10	100
Yearly average	46.70	41.80	90	46.40	99	47.50	102
1965/66							
Oct.-Dec.	43.60	37.90	87	45.60	105	50.00	115
Jan.-Mar.	46.80	39.50	84	48.60	104	52.90	113
Apr.-June	46.80	39.40	84	47.50	101	50.40	108
July-Sept.	52.10	42.60	82	47.40	91	50.00	96
Yearly average	47.30	39.80	84	47.30	100	50.80	107
1966/67							
Oct.-Dec.	50.40	40.90	81	48.80	97	51.20	102
Jan.-Mar.	50.70	42.60	84	48.60	96	50.00	99
Apr.-June	49.60	43.60	88	47.30	95	51.20	103
July-Sept.	44.60	42.10	94	45.90	103	48.80	109
Yearly average	48.80	42.30	87	47.60	98	50.30	103
1967/68							
Oct.-Dec.	40.70	38.40	94	46.20	114	47.10	116
Jan.-Mar.	41.10	41.60	101	50.60	123	47.90	117
Apr.-June	41.80	40.60	97	49.40	118	46.70	112
July-Sept.	39.30	36.40	93	39.30	100	40.70	104
Yearly average	40.70	39.20	96	46.40	114	45.60	112
1968/69							
Oct.-Dec.	40.40	37.40	93	40.40	100	42.10	104
Jan.-Mar.	42.10	39.00	93	45.20	107	42.10	100
Apr.-June	46.10	40.40	88	42.10	91	43.30	94
July-Sept.	45.70	41.80	91	38.60	84	38.80	85
Yearly average	43.60	39.60	91	41.60	95	41.60	95
1964-68 average	45.40	40.50	89	45.90	101	47.20	104

1/ Percent of corn. Percentages are averages of 5 years; not computed from 5-year average prices.

Table 10.--Corn prices as related to prices of mill feeds and molasses, per ton, Chicago, by quarters, 1948-52 and 1964-68

Year and quarter	Corn, No. 2 Yellow	Wheat middlings		Hominy feed		Gluten feed		Molasses 2/	
	Dol.	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/
1948/49									
Oct.-Dec.	52.50	51.50	98	48.40	92	50.90	97	37.79	72
Jan.-Mar.	48.90	51.70	106	40.40	83	49.80	102	23.81	49
Apr.-June	49.30	58.60	119	41.40	84	46.60	95	20.48	42
July-Sept.	48.20	49.00	102	41.30	86	47.90	99	20.06	42
Yearly average	49.70	52.70	106	42.90	86	48.80	98	25.54	51
1949/50									
Oct.-Dec.	44.60	46.40	104	42.10	94	44.80	100	21.05	47
Jan.-Mar.	48.20	45.80	95	42.40	88	47.70	99	21.68	45
Apr.-June	53.20	58.10	109	47.30	89	49.30	93	26.42	50
July-Sept.	55.70	67.80	122	51.00	92	45.50	82	39.33	71
Yearly average	50.40	54.50	108	45.70	91	46.80	93	27.12	54
1950/51									
Oct.-Dec.	57.90	62.40	108	52.20	90	43.10	74	60.93	105
Jan.-Mar.	65.00	60.60	93	54.60	84	47.50	73	70.50	108
Apr.-June	63.60	68.40	108	56.60	89	43.10	68	68.92	108
July-Sept.	64.30	61.80	96	57.80	90	47.40	74	64.77	101
Yearly average	62.70	63.30	101	55.30	88	45.30	72	66.28	106
1951/52									
Oct.-Dec.	67.10	66.60	99	62.40	93	48.00	72	62.28	93
Jan.-Mar.	67.50	68.20	101	59.90	89	58.30	86	59.57	88
Apr.-June	66.10	67.80	103	59.80	90	60.00	91	49.52	75
July-Sept.	64.60	61.00	94	58.60	91	61.00	94	38.53	60
Yearly average	66.30	65.90	99	60.20	91	56.80	86	52.47	79
1952/53									
Oct.-Dec.	58.20	59.10	102	55.00	94	60.00	103	29.15	50
Jan.-Mar.	57.10	57.00	100	51.30	90	60.10	105	30.82	54
Apr.-June	57.10	56.40	99	52.60	92	50.70	89	31.13	55
July-Sept.	58.20	48.90	84	52.80	91	45.80	79	31.85	55
Yearly average	57.60	55.40	96	52.90	92	54.20	94	30.74	53
1948-52 average 3/	57.30	58.40	102	51.40	90	50.40	89	40.43	69
1964/65									
Oct.-Dec.	44.30	45.30	102	44.00	99	45.70	103	23.57	53
Jan.-Mar.	46.80	44.10	94	44.70	96	41.90	90	23.95	51
Apr.-June	48.60	43.10	89	45.10	93	42.10	87	24.19	50
July-Sept.	47.10	43.00	91	44.80	95	42.40	90	23.62	50
Yearly average	46.70	43.90	94	44.60	96	43.00	92	23.83	51
1965/66									
Oct.-Dec.	43.60	44.80	103	41.20	94	45.30	104	24.49	56
Jan.-Mar.	46.80	48.20	103	43.10	92	49.70	106	25.83	55
Apr.-June	46.80	44.60	95	43.40	93	45.80	98	31.50	67
July-Sept.	52.10	48.60	93	49.10	94	49.00	94	33.53	64
Yearly average	47.30	46.60	99	44.20	93	47.40	100	28.84	61
1966/67									
Oct.-Dec.	50.40	57.50	114	49.60	98	56.00	111	37.68	75
Jan.-Mar.	50.70	52.50	104	46.10	91	53.60	106	40.36	80
Apr.-June	49.60	48.20	97	44.90	91	45.30	91	38.94	79
July-Sept.	44.60	44.40	100	43.60	98	45.70	102	38.08	85
Yearly average	48.80	50.60	104	46.10	94	50.20	103	38.80	80
1967/68									
Oct.-Dec.	40.70	50.00	123	40.00	98	49.00	120	36.69	90
Jan.-Mar.	41.10	47.50	116	40.50	99	49.10	119	35.68	87
Apr.-June	41.80	43.00	103	38.40	92	42.50	102	32.77	78
July-Sept.	39.30	38.20	97	37.00	94	38.90	99	32.00	81
Yearly average	40.70	44.70	110	39.00	96	44.90	110	34.28	84
1968/69									
Oct.-Dec.	40.40	48.70	121	40.50	100	46.00	114	29.87	74
Jan.-Mar.	42.10	48.10	114	43.60	104	47.30	112	29.27	70
Apr.-June	46.10	41.10	89	41.30	90	40.70	88	29.80	65
July-Sept.	45.70	41.40	91	39.00	85	40.80	89	31.77	70
Yearly average	43.60	44.80	103	41.10	94	43.70	100	30.20	69
1964-68 average 3/	45.40	46.10	102	43.00	95	45.80	101	31.20	69

1/ Percent of corn. 2/ At Kansas City. 3/ Percentages are averages of 5 years; not computed from 5-year average prices.

Table 11.--Soybean meal prices as related to prices of other high-protein feeds, per ton, by quarters, 1948-52 and 1964-68

Year and quarter	Soybean meal, 44% protein, Chicago	Cottonseed meal, 41% protein, Memphis		Linseed meal, 34% protein, Chicago		Meat meal, 50% protein, Chicago		Fish meal, 50% protein, Buffalo		Gluten feed, 21% protein, Chicago	
	Dol.	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/	Dol.	Pct. 1/
1948/49											
Oct.-Dec.	69.80	65.50	94	79.00	113	101.70	146	133.90	192	50.90	73
Jan.-Mar.	63.90	55.40	87	77.60	121	106.70	167	164.20	257	49.80	78
Apr.-June	67.50	53.10	79	64.20	95	114.10	169	204.80	303	46.60	69
July-Sept.	85.60	61.20	71	66.90	78	131.70	154	180.40	211	47.90	56
Yearly average	71.70	58.80	82	71.90	100	113.60	158	170.80	238	48.80	68
1949/50											
Oct.-Dec.	66.70	56.70	85	74.50	112	108.10	162	174.00	261	44.80	67
Jan.-Mar.	62.40	54.20	87	74.20	119	103.60	166	166.40	267	47.70	76
Apr.-June	75.90	61.40	81	76.10	100	106.90	141	135.90	179	49.30	65
July-Sept.	75.30	68.60	91	71.90	95	121.20	161	128.40	171	45.50	60
Yearly average	70.10	60.20	86	74.20	106	110.00	157	151.20	216	46.80	67
1950/51											
Oct.-Dec.	65.80	50.00	76	69.20	105	111.80	170	128.60	195	43.10	66
Jan.-Mar.	73.10	74.40	102	75.60	103	115.10	157	142.90	195	47.50	65
Apr.-June	69.10	74.30	108	66.30	96	107.00	155	126.70	183	43.10	62
July-Sept.	73.40	63.60	87	71.20	97	103.60	141	127.50	174	47.40	65
Yearly average	70.40	65.60	93	70.60	100	109.40	155	131.40	187	45.30	64
1951/52											
Oct.-Dec.	80.00	75.80	95	78.30	98	108.50	136	139.40	174	48.00	60
Jan.-Mar.	80.40	77.00	96	78.40	98	113.10	141	142.80	178	58.30	73
Apr.-June	96.50	86.50	90	84.20	87	102.50	106	138.40	143	60.00	62
July-Sept.	102.90	88.50	86	88.50	86	109.50	106	130.90	127	61.00	59
Yearly average	90.00	82.00	91	82.40	92	108.40	120	137.90	153	56.80	63
1952/53											
Oct.-Dec.	82.70	79.20	96	92.60	112	103.30	125	137.10	166	60.00	73
Jan.-Mar.	73.20	72.50	99	86.90	119	86.10	118	131.80	180	60.10	82
Apr.-June	74.20	58.90	79	74.70	101	74.30	100	139.50	188	50.70	68
July-Sept.	68.90	56.00	81	71.50	104	84.40	122	129.60	188	45.80	66
Yearly average	74.80	66.60	89	81.40	109	87.00	116	134.50	180	54.20	72
1948-52 average 2/	75.40	66.70	88	76.10	102	105.70	142	145.20	197	50.40	67
1964/65											
Oct.-Dec.	71.90	61.40	85	65.60	91	81.10	113	143.50	200	45.70	64
Jan.-Mar.	73.00	58.70	80	64.20	88	76.20	104	144.00	197	41.90	57
Apr.-June	75.20	56.60	75	68.30	91	81.30	108	151.70	202	42.10	56
July-Sept.	78.20	62.60	80	72.80	93	97.10	124	168.30	215	42.40	54
Yearly average	74.60	59.80	80	67.70	91	83.90	112	151.90	204	43.00	58
1965/66											
Oct.-Dec.	77.00	62.50	81	74.80	97	91.40	119	176.00	229	45.30	59
Jan.-Mar.	80.20	69.90	87	76.90	96	108.30	135	175.00	218	49.70	62
Apr.-June	87.20	71.20	82	81.40	93	105.90	121	167.90	192	45.80	53
July-Sept.	98.80	85.90	87	88.30	89	115.80	117	163.50	165	49.00	50
Yearly average	85.80	72.40	84	80.40	94	105.30	123	170.60	199	47.40	55
1966/67											
Oct.-Dec.	86.40	79.70	92	85.50	99	102.60	119	146.10	169	56.00	65
Jan.-Mar.	83.60	77.80	93	77.90	93	90.30	108	139.40	167	53.60	64
Apr.-June	79.80	75.90	91	77.70	94	85.10	107	128.40	155	45.30	57
July-Sept.	83.10	76.60	92	80.40	97	97.90	118	128.80	155	45.70	55
Yearly average	83.20	77.50	93	80.40	97	94.00	113	135.70	163	50.20	60
1967/68											
Oct.-Dec.	76.80	76.90	100	78.80	103	83.80	109	121.10	158	49.00	64
Jan.-Mar.	79.20	77.20	97	82.70	104	86.10	109	117.30	148	49.10	62
Apr.-June	80.80	77.80	96	84.80	105	91.00	113	135.30	167	42.50	53
July-Sept.	88.60	78.40	88	80.40	91	94.50	107	154.10	174	38.90	44
Yearly average	81.40	77.60	95	81.70	100	88.80	109	132.00	162	44.90	55
1968/69											
Oct.-Dec.	78.90	66.50	84	76.70	97	94.10	119	152.10	193	46.00	58
Jan.-Mar.	75.20	65.20	87	73.10	97	87.50	116	148.90	198	47.30	63
Apr.-June	80.10	60.10	75	75.50	94	88.20	110	172.50	215	40.70	51
July-Sept.	80.10	68.90	86	74.60	93	96.40	120	172.00	215	40.80	51
Yearly average	78.60	65.20	83	75.00	95	91.60	117	161.40	205	43.70	56
1964-68 average 2/	80.70	70.50	87	77.00	95	92.70	115	150.30	187	45.90	57

1/ Percent of soybean meal. 2/ Percentages are averages of 5 years; not computed from 5-year average prices.

Table 12 --Feed grains and hay: Acreage planted by regions, annual 1963-70

Year	North Atlantic	East North Central	West North Central	South Atlantic	South Central	Western	United States
				1,000 acres			
				CORN			
1963	2,125	21,399	32,607	5,913	5,743	984	68,771
1964	2,126	22,145	29,649	5,655	5,246	1,002	65,823
1965	2,195	22,837	28,829	5,504	4,701	1,053	65,119
1966	2,199	23,731	29,036	5,593	4,592	1,155	66,306
1967	2,277	24,800	32,352	5,861	4,549	1,254	71,093
1968	2,247	22,900	29,058	5,585	4,114	1,222	65,126
1969 1/	2,334	22,372	28,651	5,496	4,087	1,317	64,257
1970 2/	2,413	23,314	29,965	5,640	3,920	1,410	66,662
				OATS			
1963	1,305	6,301	13,734	1,279	3,886	1,549	28,054
1964	1,266	5,616	13,031	1,060	3,168	1,493	25,634
1965	1,192	4,989	12,256	900	3,104	1,569	24,010
1966	1,172	5,020	12,163	846	2,605	1,495	23,301
1967	1,093	4,159	11,104	878	2,214	1,198	20,646
1968	1,043	4,779	12,711	829	2,487	1,317	23,166
1969 1/	973	4,486	12,944	795	2,822	1,616	23,636
1970 2/	953	4,345	13,199	793	3,491	1,815	24,596
				BARLEY			
1963	219	191	5,317	372	1,299	6,054	13,452
1964	193	136	4,225	392	1,042	5,664	11,652
1965	199	113	3,674	385	672	5,056	10,099
1966	212	112	4,266	377	718	5,449	11,134
1967	224	116	4,022	401	471	4,768	10,002
1968	249	147	4,414	394	566	4,707	10,477
1969 1/	256	114	3,489	388	706	5,205	10,158
1970 2/	249	120	3,366	402	793	5,743	10,673
				SORGHUMS, ALL PURPOSES			
1963	---	36	7,864	169	8,042	1,405	17,516
1964	---	39	7,467	178	7,562	1,524	16,770
1965	---	43	7,811	158	7,355	1,712	17,079
1966	---	41	7,139	156	7,585	1,451	16,372
1967	---	41	7,859	176	9,143	1,788	19,007
1968	---	44	7,338	160	8,801	1,671	18,014
1969 1/	---	44	6,658	175	8,848	1,713	17,438
1970 2/	---	39	7,200	179	9,494	1,645	18,557
				FOUR FEED GRAINS			
1963	3,649	27,927	59,522	7,733	18,970	9,992	127,793
1964	3,585	27,936	54,372	7,285	17,018	9,683	119,879
1965	3,586	27,982	52,570	6,947	15,832	9,390	116,307
1966	3,583	28,904	52,604	6,972	15,500	9,550	117,113
1967	3,594	29,116	55,337	7,316	16,377	9,008	120,748
1968	3,539	27,870	53,521	6,968	15,968	8,917	116,783
1969 1/	3,563	27,016	51,742	6,854	16,463	9,851	115,489
1970 2/	3,615	27,818	53,730	7,014	17,698	10,613	120,488
				ALL HAY 3/			
1963	6,910	10,801	24,605	3,626	9,017	11,469	66,428
1964	6,769	10,761	25,236	3,644	9,366	11,599	67,375
1965	6,628	10,604	25,358	3,488	9,594	12,012	67,684
1966	6,605	10,192	24,481	3,317	9,104	11,441	65,140
1967	6,329	9,770	24,477	3,275	9,010	11,806	64,667
1968	6,004	9,575	23,367	3,288	9,026	11,433	62,693
1969 1/	5,879	9,196	22,789	3,245	8,698	12,031	61,838
1970 2/	5,755	9,079	22,997	3,217	8,861	12,156	62,065

1/ Preliminary. 2/ Prospective acreage based on March 1 intentions of farmers. 3/ Harvested acreage of all hay.

Table 13.--Argentine corn: Supply and disappearance, average 1963-67, annual 1962-70

Marketing year beginning April	Supply			Disappearance		
	Beginning stocks 1/	Production	Total	Domestic	Export	Total
	Million bushels					
Average 1963-67	3	235	238	104	132	236
1962	3	206	209	93	113	206
1963	3	172	175	70	100	170
1964	5	211	216	82	132	214
1965	2	202	204	95	107	202
1966	2	277	279	120	158	278
1967	1	315	316	152	163	315
1968 2/	1	258	259	123	136	259
1969 2/	---	272	272	134	138	272
1970 3/	---	358	358			

1/ Unofficial estimates. 2/ Preliminary. 3/ Based on March 1970 indications.

Grain and Feed Division, FAS, USDA.

Table .--Republic of South African corn: Supply and disappearance, average 1963-67, annual 1962-70

Marketing year beginning May	Supply			Disappearance		
	Beginning stocks 1/	Production	Total	Domestic	Export	Total
	Million bushels					
Average 1963-67	30	233	263	159	62	221
1962	44	236	280	135	102	237
1963	43	240	283	140	109	249
1964	44	168	212	146	43	189
1965	23	177	2/204	174	19	193
1966	11	199	2/216	170	19	189
1967	27	379	406	163	122	285
1968 3/	121	209	330	194	106	300
1969 3/	30	194	2/271	194	20	214
1970 4/	57	299	356			

1/ Unofficial estimates. 2/ Includes imports. 3/ Preliminary. 4/ Based on March 1970 indications.

Grain and Feed Division, FAS, USDA.

Table 15.--Corn and sorghum grain: Average price received by farmers, United States, by months, 1960-70

Year beginning October	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average weighted by sales 1/
							Dollars						
							CORN, per bushel						
1960	.992	.902	.919	.970	1.01	1.01	.968	1.02	1.03	1.05	1.04	1.04	1.00
1961	1.02	.992	.994	.993	.996	1.00	1.02	1.04	1.04	1.05	1.03	1.04	1.10
1962	1.03	.987	1.04	1.07	1.09	1.10	1.10	1.11	1.16	1.19	1.19	1.21	1.12
1963	1.11	1.05	1.09	1.12	1.11	1.13	1.15	1.17	1.16	1.12	1.12	1.17	1.11
1964	1.13	1.07	1.16	1.18	1.20	1.21	1.23	1.26	1.25	1.22	1.18	1.18	1.17
1965	1.10	1.04	1.13	1.19	1.20	1.17	1.19	1.21	1.20	1.27	1.34	1.35	1.16
1966	1.29	1.26	1.29	1.28	1.26	1.28	1.26	1.25	1.26	1.21	1.11	1.12	1.24
1967	1.04	.975	1.03	1.04	1.06	1.06	1.06	1.09	1.07	1.04	.986	1.01	1.03
1968	.962	1.04	1.05	1.08	1.09	1.09	1.12	1.19	1.18	1.18	1.18	1.15	2/1.08
1969	1.12	1.07	1.09	1.12	1.14	1.13							2/1.13
							GRAIN SORGHUM, per 100 pounds						
1960	1.42	1.42	1.41	1.46	1.48	1.52	1.48	1.56	1.65	1.73	1.68	1.65	1.49
1961	1.61	1.63	1.65	1.65	1.67	1.67	1.68	1.71	1.71	1.74	1.70	1.68	1.80
1962	1.62	1.61	1.64	1.68	1.70	1.72	1.71	1.72	1.75	1.77	1.76	1.78	1.82
1963	1.73	1.73	1.76	1.76	1.75	1.75	1.74	1.76	1.78	1.79	1.82	1.86	1.74
1964	1.86	1.88	1.93	1.94	1.95	1.93	1.93	1.97	1.97	1.87	1.88	1.83	1.87
1965	1.70	1.71	1.73	1.74	1.79	1.77	1.76	1.77	1.78	1.79	1.87	1.88	1.76
1966	1.73	1.77	1.84	1.86	1.90	1.94	1.94	1.97	1.97	2.08	1.95	1.80	1.82
1967	1.68	1.68	1.73	1.75	1.86	1.86	1.83	1.84	1.80	1.74	1.63	1.62	1.77
1968	1.60	1.68	1.72	1.74	1.77	1.76	1.76	1.81	1.81	1.82	1.92	1.97	2/1.69
1969	1.91	1.94	1.92	1.92	1.92	1.87							2/1.93

1/ Includes an allowance for unredeemed loans and purchase agreement deliveries valued at the average loan rate, by States. 2/ Preliminary.

Table 16.--Oats and barley: Average price per bushel received by farmers, United States, by months, 1960-70

Year beginning July	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average weighted by sales 1/
							Dollars						
							OATS						
1960	.629	.578	.601	.597	.588	.585	.598	.602	.593	.581	.598	.626	.599
1961	.642	.603	.640	.637	.643	.659	.665	.648	.652	.664	.667	.684	.642
1962	.621	.572	.604	.616	.633	.644	.645	.654	.656	.650	.635	.668	.624
1963	.623	.582	.616	.631	.634	.639	.646	.638	.631	.632	.628	.633	.622
1964	.593	.577	.606	.616	.625	.641	.656	.659	.660	.667	.676	.678	.631
1965	.634	.596	.601	.615	.621	.633	.644	.649	.646	.648	.655	.669	.622
1966	.664	.635	.649	.657	.663	.677	.682	.674	.682	.680	.693	.717	.665
1967	.669	.622	.638	.647	.651	.661	.667	.686	.687	.694	.692	.694	.659
1968	.606	.533	.561	.582	.603	.607	.625	.644	.621	.614	.624	.625	2/.599
1969	.580	.526	.546	.571	.578	.580	.587	.591	.581				2/.574
							BARLEY						
1960	.846	.801	.817	.843	.793	.839	.820	.859	.847	.847	.875	.868	.840
1961	.924	.951	.968	.986	1.00	1.01	1.03	1.04	1.03	1.01	1.02	.980	.979
1962	.986	.898	.888	.889	.898	.917	.896	.910	.902	.887	.919	.974	.915
1963	.956	.848	.853	.914	.936	.946	.925	.901	.902	.906	.923	.957	.897
1964	.960	.879	.919	.935	.961	.970	.961	.980	.968	.969	1.01	1.03	.947
1965	1.04	.989	.982	.989	1.02	1.03	1.03	1.07	1.06	1.03	1.06	1.08	1.02
1966	1.06	1.05	1.06	1.06	1.06	1.06	1.04	1.03	1.02	1.02	1.05	1.06	1.05
1967	1.06	1.01	.982	.984	.974	.975	.978	.984	.971	.963	.986	.983	1.00
1968	.931	.814	.875	.881	.891	.902	.898	.909	.898	.922	.975	1.04	2/ .908
1969	.953	.816	.856	.868	.881	.892	.877	.860	.831				2/ .896

1/ Includes an allowance for unredeemed loans and purchase agreement deliveries valued at the average loan rate, by States. 2/ Preliminary.

Table 17.--Corn price support activity and farm prices, 1967-69 crops

Month	[Loan-$1.05]					
	1967		1968		1969	
	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel
	Mil. bu.	Dol.	Mil. bu.	Dol.	Mil. bu.	Dol.
October	5	1.04	10	.96	9	1.12
November	52	.98	72	1.04	52	1.07
December	194	1.03	180	1.05	167	1.09
January	347	1.04	330	1.08	337	1.12
February	387	1.06	367	1.09	366	1.14
March	411	1.06	385	1.09		1.13
April	420	1.06	393	1.12		
May	427	1.09	396	1.19		
June	439	1.07	399	1.18		
July	447	1.04	402	1.18		
August	453	.99	402	1.18		
September	453	1.01	403	1.15		
Total and av. 1/	453	1.03	403	1.08		

1/ Prices are the season average for the marketing year.

Table 18.--Grain sorghum price support activity and farm prices, 1967-69 crops

Month	[Loan-$1.61]		[Loan-$1.62]		[Loan-$1.61]	
	1967		1968		1969	
	Placed under loan (cumulative)	Farm price per cwt.	Placed under loan (cumulative)	Farm price per cwt.	Placed under loan (cumulative)	Farm price per cwt.
	Mil. bu.	Dol.	Mil. bu.	Dol.	Mil. bu.	Dol.
July	---	2.08	---	1.74	---	1.82
August	---	1.95	5	1.63	2	1.92
September	1	1.80	6	1.62	2	1.97
October	5	1.68	16	1.60	6	1.91
November	25	1.68	39	1.68	12	1.94
December	41	1.73	51	1.72	22	1.92
January	59	1.75	69	1.74	36	1.92
February	61	1.86	71	1.77	37	1.92
March	62	1.86	72	1.76		1.87
April	62	1.83	73	1.76		
May	63	1.84	73	1.81		
June	64	1.80	74	1.81		
Total and av. 1/	64	1.77	74	1.69		

1/ Prices are the season average for the marketing year.

Table 19.--Barley price support activity and farm prices, 1967-69 crops

Month	[Loan-90 cents]				[Loan-83 cents]	
	1967		1968		1969	
	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel
	Mil. bu.	Dol.	Mil. bu.	Dol.	Mil. bu.	Dol.
July	1	1.06	8	.93	2	.95
August	4	1.01	31	.81	4	.82
September	16	.98	54	.88	20	.86
October	25	.98	73	.88	32	.87
November	29	.97	84	.89	35	.88
December	32	.98	89	.90	37	.89
January	39	.98	102	.90	44	.88
February	41	.98	106	.91	47	.86
March	43	.97	109	.90		.83
April	45	.96	113	.92		
May	46	.99	115	.98		
June	47	.98	116	1.04		
Total and av. 1/	47	1.00	116	.91		

1/ Prices are the season average for the marketing year.

Table 20.--Oat price support activity and farm prices, 1967-69 crops

Month	[Loan-63 cents]					
	1967		1968		1969	
	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel	Placed under loan (cumulative)	Farm price per bushel
	Mil. bu.	Cents	Mil. bu.	Cents	Mil. bu.	Cents
July	---	67	1	61	4	58
August	4	62	19	53	16	53
September	17	64	42	56	64	55
October	25	65	60	58	97	57
November	27	65	67	60	105	58
December	30	66	72	61	111	58
January	33	67	80	62	131	59
February	34	69	82	64	137	59
March	35	69	84	62		58
April	36	69	87	61		
May	36	69	89	62		
June	36	69	89	62		
Total and av. 1/	36	66	89	60		

1/ Prices are the season average for the marketing year.

Table 21.--Market receipts of corn, oats and barley, marketing years 1968/69 and 1969/70

Year beginning	Corn 1/		Year beginning	Oats 1/		Barley 2/	
	1968/69	1969/70		1968/69	1969/70	1968/69	1969/70
	Mil. bu.			Mil. bu.			
Oct.	31	26	July	6	12	8	21
Nov.	56	46	Aug.	18	25	12	21
Dec.	41	40	Sept.	9	10	14	13
Jan.	15	15	Oct.	5	6	10	10
Feb.	16	21	Nov.	3	4	7	7
Mar.	17	26	Dec.	5	4	7	8
Apr.	15		Jan.	2	4	5	8
May	21		Feb.	4	5	8	7
June	27		March	4	4	11	8
July	37		Apr.	3		10	
Aug.	35		May	4		9	
Sept.	29		June	7		14	
Total	340		Total	70		115	

1/ Chicago, Milwaukke, Minneapolis, Duluth, St. Louis, Kansas City, Peoria, Omaha, Indianapolis, Sioux City, St. Joseph, Wichita and Toledo.

2/ Minneapolis, Milwaukee, Chicago and Duluth.

Table 22.--Corn: Inspected receipts by grades at principal markets, following harvest of 1966-69 crops 1/

Grade	1966		1967		1968		1969	
	Receipts	% of total	Receipts	% of total	Receipts	% of total	Receipts	% of total
	Mil. bu.		Mil. bu.		Mil. bu.		Mil. bu.	
1	1.9	2	2.0	2	2.9	2	2.7	2
2	19.8	17	19.2	15	41.5	28	30.3	23
3	34.9	31	37.8	30	51.6	36	39.9	30
4	25.9	23	27.6	22	31.2	22	31.2	24
5	21.1	18	25.2	20	11.6	8	16.6	13
Sample	9.8	9	13.1	11	6.1	4	11.1	8
Total	113.4	100	124.9	100	144.9	100	131.8	100

1/ Two months during and following harvest.

Source: Grain Division, Consumer and Marketing Service, USDA.

Table 23.--Prices of selected processed feeds at principal markets, 1967-70 1/

[Dollars per ton]

Year beginning October	MEALS								
	Soybean, 44%, Decatur			Cottonseed, 41%, Memphis			Meat meal, 50%, Chicago		
	1967	1968	1969	1967	1968	1969	1967	1968	1969
October	71.80	78.20	75.40	76.10	66.20	63.40	87.00	97.00	93.10
November	71.90	73.50	69.90	76.60	65.60	67.75	82.80	94.40	97.20
December	73.40	71.60	82.90	78.10	67.80	78.00	81.60	91.00	99.00
January	75.10	69.80	87.50	77.90	68.40	88.10	88.70	92.80	121.90
February	74.50	69.90	85.25	77.60	64.60	74.50	84.40	88.80	134.40
March	75.00	72.60	71.85	76.20	62.50	64.45	85.30	80.90	107.10
April	74.60	73.30		77.00	61.70		86.70	84.80	
May	75.00	76.10		77.60	59.10		90.60	87.50	
June	79.50	77.50		78.20	59.60		95.60	92.40	
July	82.80	77.30		78.20	68.00		96.50	101.00	
August	84.40	76.90		78.00	71.00		92.80	95.30	
September	85.10	72.70		79.10	67.80		94.10	93.00	
Average	76.90	74.10		77.60	65.20		88.80	91.60	
	Fish meal, 60%, New York			Gluten feed, 21%, Chicago			Wheat middlings, Minneapolis		
	1967	1968	1969	1967	1968	1969	1967	1968	1969
October	124.30	129.20	193.40	46.80	42.80	47.00	44.20	38.10	42.10
November	121.40	129.60	202.40	49.20	46.00	49.50	45.60	44.40	43.25
December	121.00	135.20	203.80	51.00	49.20	51.60	45.90	49.10	46.30
January	120.20	140.20	197.50	53.20	50.00	56.75	44.30	47.80	53.60
February	119.00	141.00	185.50	48.50	48.50	56.00	40.90	42.50	41.25
March	115.70	140.50	196.00	45.70	43.50	44.40	41.40	38.70	36.80
April	115.00	145.00		43.20	42.00		38.10	41.90	
May	131.40	161.00		42.50	40.00		39.70	32.40	
June	139.20	168.00		41.70	40.00		37.90	35.30	
July	142.80	173.90		38.60	40.00		33.40	34.30	
August	141.00	172.10		38.00	40.00		32.60	34.10	
September	132.80	171.80		40.00	42.40		34.20	40.40	
Average	127.00	150.60		44.90	43.70		39.80	39.90	

1/ Bulk, except fish meal which are bagged basis.

Table 24.--Production, stocks, and foreign trade in processed feeds, foreign trade in feed grains, and corn and barley processing, specified months 1/

Commodity	Production					Stocks 2/				
	1969	1969/70				1969	1969/70			
	Feb.	Nov.	Dec.	Jan.	Feb.	Mar. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1
	1,000 tons					1,000 tons				
Processed feeds										
Soybean meal	1,060.1	1,460.3	1,498.2	1,475.0	1,382.6	216.5	173.2	131.6	135.8	153.2
Cottonseed meal	215.9	229.9	240.0	232.5	217.8	167.5	79.0	74.9	83.6	109.4
Linseed meal	22.4	24.7	17.4	19.9	20.6	16.0	5.9	2.4	2.8	2.0
Peanut meal	13.8	8.0	11.0	13.0	13.0	9.8	3.1	2.9	1.9	6.0
Meat meal and tankage	162.8	167.4	169.2	170.9	154.0	---	---	---	---	---
Fish meal and solubles	4.3	15.1	11.0	5.2	5.8	---	---	---	---	---
Brewers' dried grains	23.6	27.3	27.6	25.8	26.0	2.5	5.4	5.8	3.8	4.1
Distillers' dried grains	37.7	37.3	38.2	38.2	39.0	2.7	4.3	2.4	3.3	3.2
Wheat millfeeds	335.1	385.4	401.7	380.7	*	---	---	---	---	---
Rice millfeeds	30.3	38.7	43.8	38.6	*	---	---	---	---	---
Alfalfa meal, dehydrated	13.3	20.4	15.1	9.4	11.9	318.3	695.6	555.3	419.1	300.4
sun-cured	27.5	30.6	27.5	31.1	25.4	7.1	13.0	11.0	10.2	11.0
Total	40.8	51.0	42.6	40.5	37.3	325.4	708.6	566.3	429.3	311.4
Inedible tallow	41.2	40.2	44.0	45.4	41.4	---	---	---	---	---

Commodity	Foreign trade									
	Exports					Imports				
	1969	1969/70				1969	1969/70			
	Feb.	Nov.	Dec.	Jan.	Feb.	Feb.	Nov.	Dec.	Jan.	Feb.
	1,000 tons					1,000 tons				
Soybean meal	60.2	367.4	411.2	374.7	287.0	---	---	---	---	---
Cottonseed meal	.4	.5	.7	.9	..4	2.7	.1	0	3/	0
Linseed meal	.1	16.6	4.6	1.2	1.2	.2	.2	.2	.3	.2
Other oilseed meals	4.7	2.5	2.2	2.2	3.8	.2	.2	0	.2	3.2
Fish meal	---	---	---	---	---	27.6	6.6	11.0	20.3	21.4
Molasses	3.7	.3	.7	4.5	7.4	146.3	121.5	279.1	223.8	154.1
Corn byproducts	11.0	52.0	45.5	24.2	36.3	---	---	---	---	---
Wheat millfeeds	1.5	7.9	.1	.1	3/	5.0	15.6	12.1	15.7	17.9
Alfalfa meal, dehydrated	33.3	7.5	13.8	15.5	23.1	---	---	---	---	---
sun-cured	24.3	7.3	16.2	12.7	8.3	---	---	---	---	---
Total	57.6	14.8	30.0	28.2	31.4	---	---	---	---	---
Mixed poultry feed	5.2	11.2	12.3	10.3	10.6	---	---	---	---	---
Mixed dairy feed	1.7	9.1	2.1	13.7	19.1	---	---	---	---	---
	1,000 bushels					1,000 bushels				
Feed grains (including products)										
Corn	16,767	80,686	49,447	41,171	52,562	95	44	85	63	226
Grain sorghum	4,011	11,131	9,681	14,380	11,453	0	0	0	3	0
Oats	302	279	304	247	735	210	117	198	254	170
Barley	77	260	230	130	190	169	1,934	2,637	591	238
Total (1,000 s. tons)	588	2,582	1,666	1,562	1,809	10	50	69	20	15

Commodity	Grain processing or use						
	1969		1969/70				
	January	February	October	November	December	January	February
	1,000 bushels						
Corn							
Distilled spirits & alcohol	3,262	3,136	3,083	2,756	2,701	3,073	*
Grain sorghum							
Distilled spirits & alcohol	281	252	318	254	239	214	*
Barley							
Malt liquors	7,436	7,362	8,929	7,043	7,887	7,796	*
Distilled spirits & alcohol	700	631	606	606	588	655	*

1/ Data compiled from reports of the Bureau of the Census, Consumer and Marketing Service, Fish and Wildlife Service of the Department of the Interior. 2/ At processors' plants. 3/ Less than 50 tons. *Not yet available.

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